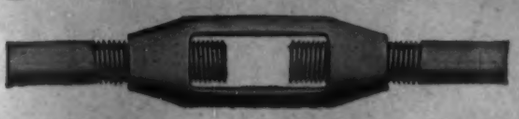
The American Artisan
And Hardware Record

Vol. 56. No. 13. CHICAGO, SEPTEMBER 26, 1908. $2.00 Per Year.

TURN BUCKLES



A full line of Bolts, Bolt Ends, Rivets, Lag Screws, Nuts, Washers and Carriage Hardware.

COLUMBUS BOLT WORKS, COLUMBUS, OHIO.

GET THE LIVE LINE

"AMERICAN SEAL"

Elastic Oil Roofing Cement, Stove Putty and Asbestos Furnace Cement

For Furnaces, Stoves, Ranges and Roofs.

Jobbers write to-day for prices

THE

Wm. Connors Paint Mfg. Co.

Makers. TROY, N. Y.

Western Agents: Friedley-Voshardt Co., 194 Mather St., Chicago, Ill.

Southwestern Agents: Stockhoff Supply Co., 107 N. Main St., St. Louis, Mo.

This Space for Sale.
Inquire of Daniel Stern,
355 Dearborn St., Chicago

MATCHLESS

Spring and Pivot Hinges

Floor Hinges, Jamb Hinges and Hardware Specialties.

The fact that Matchless Spring Hinges have been on the market since 1895 and that in that time not one set has required repairs from fault of hinge speaks very well for their serviceability and wearing qualities.

If your Jobber cannot furnish them write us.

LAWSON MFG. CO.
40 Dearborn St., Chicago, Ill.

WIZARD

ADJUSTABLE HINGE HANGER

Made of best quality Malleable Iron. The two sets of Steel Roller Bearings reduce friction and make an exceptionally easy running hanger. Lateral and Vertical adjustment. No special track required. *Ask your jobber or write us.*

SAFETY DOOR HANGER CO.
Manufacturers
Ashland, O., Hamilton, Ont., Can.

"NEVER-BREAK"

TRADE MARK

Catalog Free

"NEVER-BREAK"

STEEL SPIDERS, GRIDDLES AND KETTLES

WILL NOT **Scale Off** like cheap enamel.

WILL NOT **Scorch or Burn** like light fry pans and skillets.

WILL NOT **Absorb Grease or Flavors** like cast Iron.

THE AVERY STAMPING CO.
CLEVELAND, OHIO
Sole Manufacturers
"NEVER-BREAK" Goods.

DELTA FILES DELTA FILES

FILES OF QUALITY

DELTA FILES

TRADE MARK DELTA

Lest You Forget—We Say It Yet

DELTA FILES

CARVER FILE CO., - Philadelphia, Pa.

An independent organization not connected with the trust in any form, shape or manner.

PULLMAN SASH BALANCES

Are you selling them?

IN USE EVERY-WHERE

Send us your orders

PULLMAN MFG. COMPANY
SOPHIA STREET
ROCHESTER, N. Y., U. S. A

Porcelain Enamel Formulas

Any kind or color, for cast iron and sheet steel, with full instructions.

Start new—and improve quality of ware in old plants.

34 Years' Practical Experience

JOHN PEIL, Columbus, O.

100 Tinners' Patterns

Complete for

$1.00

Sent Postpaid on Receipt of Price

Daniel Stern

355 Dearborn Street - Chicago

"The Hottest Stove in Dixie"

(From a Southern Customer's Letter)

Our friend starts off by quoting from John Temple Graves' Eulogy of the Sunny South.

> ***—"Where the mint patch flourishes—where hospitality is the one endeavor of the generous residents and where the weary wayfarer is welcomed with outstretched hands to groaning boards"—This is the Sunny South.

In such a country good cooking apparatus is a boon to humanity.

The kitchen that caters to whole families of epicures—is traditionally the "Storm Center of the Household Help Problem."

When such storms burst with fury over a Cook Stove that "will not bake on the bottom" and the phone calls me to suggest a "plan of peace," I always prescribe a Cinderella Steel Range—they bake on sides—bottoms—tops and everywhere.

Upon their advent into a kitchen the storm subsides and "Culinary Rainbows" spread from wall to wall.

From out the kitchen door floats the melody of happy negros' voices as they go cheerfully about their work—and every product of that kitchen is worthy this label—"Art is the expression of man's joy in his work."

It is such results as these that have made me push Cinderella Steel Ranges with my heart, strength and vocabulary. They bake on the bottom—they do, they do, they do. Send for catalogue and figures.

STOVE & RANGE CO. OF PITTSBURGH, Pittsburgh, Pa.

The Patented Square Pot and Square Grate

Used in all Boynton Square Pot Furnaces

There are two things to be considered in our Patented Square Pot Furnaces which should certainly appeal to you. One is that it is the latest and most important improvement in the manufacture of Warm Air Furnaces and the other is its easy saleability which means more money in it for you.

Remember we make the only furnaces that have square pots permitting free combustion and rapid clearance of ashes.

Write for Descriptive Circulars.

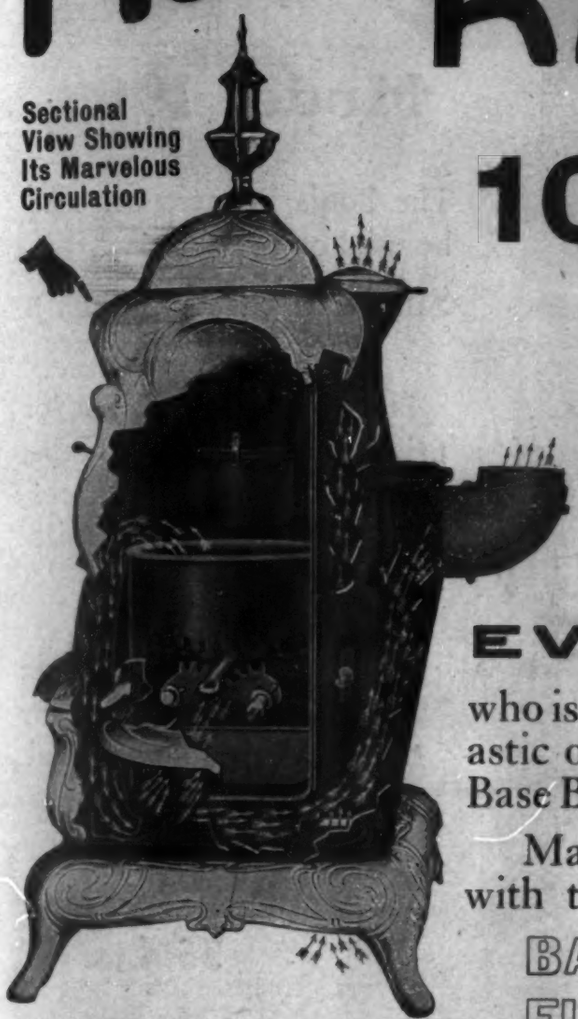
The BOYNTON FURNACE CO.

147-149 Lake St., Chicago **207-209 Water St., New York**

THE

MONITOR RADIATOR

HAS



Sectional View Showing Its Marvelous Circulation

10 BIG SELLING POINTS

Besides the

1683 SQUARE INCHES

More Radiating Surface than any other stove has

EVERY DEALER

who is handling our Radiator is enthusiastic over the stove and will sell more Base Burners this year than ever before.

Make this YOUR big year too with the only

BASE BURNER WITH FIVE FRONT FLUES

on the market, and the only stove that will absolutely give more heat with less fuel—That's what appeals to every prospective customer.

Catalog containing full description sent upon request.

THE MONITOR STOVE & RANGE CO.

Manufacturers

Cincinnati, Ohio

Distributors

For the State of Michigan, Morley Bros., Saginaw, Michigan.
For the State of Minnesota and North West, The Great Western Stove & Repair Co., Minneapolis, Minnesota.
For the State of Wisconsin, Morley Murphy Hardware Co., Green Bay, Wis.
For the States of Nebraska, Wyoming, Western Iowa and the Black Hills, Paxton & Gallagher Co., Omaha, Nebraska.

"The Greatest Light of The Age"

"Conia"

These Conia Burners give a light from 100 to 350 Candle Power, and the flame can be regulated to any desired height. Positively smokeless, and on account of the enormous candle power will not blacken the mantle.

Mantles in ordinary use will last at least a year.

Retail Price, 35 Cts.

Burners, complete to fit

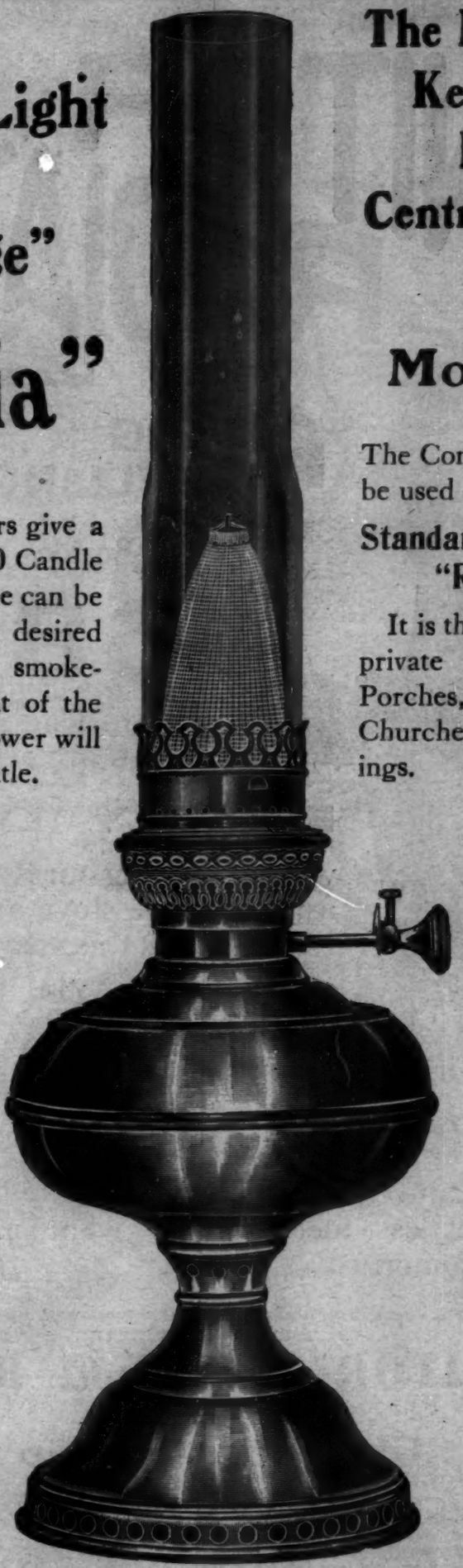
Standard Oil Company's "Rayo"

Central Draught Lamp, **$3.50.**

Retail Price, Table Lamp complete,

$5.50

Write today. We want agents in open territory.



The New Kerosene Incandescent Central Draught Lamp

Model 1909

The Conia Burners can also be used on the

Standard Oil Company's "Rayo" Lamp.

It is the Greatest Light for private Residences, Halls, Porches, Country Stores, Churches and Public Buildings.

Chimneys are made in Jena, Germany and will not break from heat.

Retail Price, 35 Cts.

G. Cohn & Co.

(Inc.)

337 Broadway

NEW YORK

GREATEST LIGHT INVENTED

Bengalia Inverted Alcohol Light

220 CANDLE POWER

Advantages:

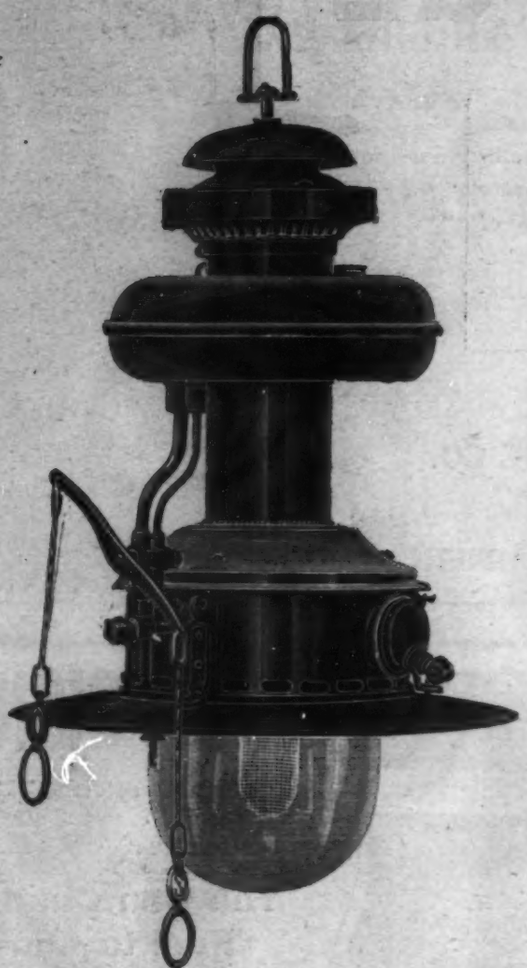
Shadeless Light

No Wick

Immediate Light

Non-Explosive

A Child Can Light It



Suitable for lighting Halls, Parlors, Stores, Gardens, Streets, Store Windows, etc. Not affected by rain or storm.

This is the cheapest Lamp for lighting stores. It is considerably cheaper than electricity and gives a beautiful white and steady light. Consumption 1 Quart Denatured Alcohol in 14 hours. Fount holds about 1½ Quarts. Price $20.00 each.

G. COHN & CO., Inc.

337 BROADWAY, NEW YORK CITY

SOLE AGENTS FOR UNITED STATES AND CANADA

AGENTS WANTED FOR OPEN TERRITORY

VAN'S

Patent Improved Wrought Steel Portable

RANGE

For Hotels, Restaurants, Public Institutions, Boarding Houses and Private Families. All kinds of Hotel Implements for culinary purposes. Manufactured and for sale by

The
JOHN VAN RANGE CO.
Southwest Corner
5th and Broadway
CINCINNATI - - OHIO

CHAMPION INTERCHANGEABLE RANGE

This is an INTERCHANGEABLE RANGE, not a combination range, nor a coal and gas range bolted together. It is something new.

You Can Change It from One Fuel to Another Instantly

This Range is bound to prove a big seller, it has so many superior features. For instance, if gas is being burned and it gives out or gets weak, in ten seconds, it can be changed to coal and the cooking can go on without interruption. **That's a Big Selling Point** which will appeal to every user of Ranges. There are others too, and they are going to create a big demand for this Range. Are you going to be able to meet the demand in your vicinity?

Better secure the agency at once. Write today.

We would be pleased to send you catalog and prices.

CHAMPION STEEL RANGE CO.
3950 W. 25th St., CLEVELAND, O.

KING QUALITY

In Entirely New Dress

Burns Soft Coal, Hard Coal, Coke or Wood.

King Quality Steel Ranges

are built with a view of making them the highest standard of excellence, leading in utility, economy and convenience.

The King Quality is a beautiful Range, sure to catch the eye of every housekeeper, and with so many exclusive features that the dealer can use as selling points, that sales are easy. **The King Quality** is made with either Cabinet or Cast Leg Base.

Write today for particulars.

Quality Stove & Range Co.
BELLEVILLE, ILL.

FOSTER'S BONANZA

With Our Patented Removable Oven Plate

A Range with selling features which make it a most profitable one for the trade to handle

A SPECIAL FEATURE is the Removable Top and Front Oven Plate. By a patented method, either oven plate can be replaced in fifteen minutes time by removing the covers of the Range and taking out three bolts.

This is a most convenient range for the consumer, as high shelf, high closet or reservoir can be added at any time.

It has a balanced drop oven door and is a complete and satisfactory range in every detail.

As trade winners Foster's Ranges are without a peer on the market. They are money makers for the dealer and a satisfaction to the consumer.

Write for Our Catalog

THE FOSTER STOVE CO.
IRONTON, OHIO

ACTUAL SIZE, 3¾" x 5"
Lithographed in Two Colors

¶ One *Very* Good Reason Why it Pays Dealers to Handle BORN'S STEEL RANGES is Because We help them to sell the goods

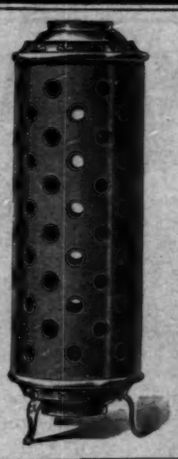
¶ We Supply them Liberally with

Attractive printed matter;
Signs to put up along the roads;
Handsome signs for the store fronts and windows;
Catchy novelties—such as the Match Safe here illustrated;
Cuts and copy for local newspaper Ads; and,
Selling Plans through our monthly "News Letter."

¶ In addition to all this, we advertise the goods in the popular family magazines, farm papers and local newspapers, thus creating a demand which benefits every BORN RANGE AGENT—no matter where located.

If no one has the Agency for your locality, it might pay you to get our Catalogue and proposition.

THE BORN STEEL RANGE CO. CLEVELAND, O.



SAVE HALF YOUR FUEL
BY USING THE

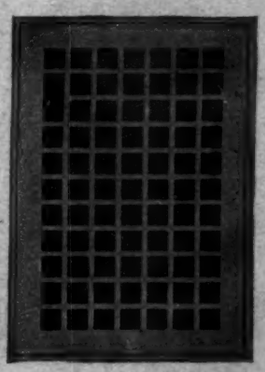
ROCHESTER RADIATOR

Satisfaction guaranteed, or money refunded Over 100,000 of them in use. Fits any stove or furnace.
We make the original and genuine Rochester Radiator.
We do not sell to Catalog Houses.

Price, from **$2.00** to **$12.00**
FOR HARD OR SOFT COAL, WOOD OR GAS.
We refer all inquiries to you from your town when you carry a stock of our Radiators.
We guarantee our Radiators not to interfere with or choke the draught.
They are easily cleaned.
Write for descriptive Catalog and Prices.

ROCHESTER RADIATOR CO., 125 Furnace St. ROCHESTER, N. Y.

Boston, Mass., S. M. Howes Co.; Detroit, Mich., Standart Bros., Ltd.; St. Paul, Minn., Farwell, Ozmun, Kirk & Co.; Omaha, Neb., Wright & Wilhelmy Co.; Sioux City, Ia., Knapp & Spencer Co.; Kansas City, Mo., The Harbison & Modica Mfg. Co.; Kingston, N. Y., Canfield Supply Co.; Portland, Ore., P. W. Isherwood, Esq.; Hamilton Ont., The D. Moore Co.



Variety—Quality—Efficiency

168 Sizes Floor Registers in five designs Vertical Wheel.
84 Sizes Floor Registers in two designs Glide Movement.
37 Sizes Convex Registers in three designs.
11 Sizes Circular Top Registers in two designs.
14 Sizes Round Registers in two designs.
42 Sizes Mouse Proof Vent Plates.
4 Sizes Convex Base Vents.
10 Sizes Special Side Wall Registers in three designs.
6 Sizes Reversible Wafers in two designs.
3 Sizes Pedestal Registers.
43 Sizes Lock Asylum Registers in two designs.
135 Sizes Wall Frames 2" and 4".

FERROSTEEL CAST—WROUGHT STEEL—MODIFIED STEEL.
Every known special and Stock Finish. Write for our Catalog and discounts.

FERROSTEEL COMPANY, Cleveland, Ohio

Munsell's Mica

THE STANDARD

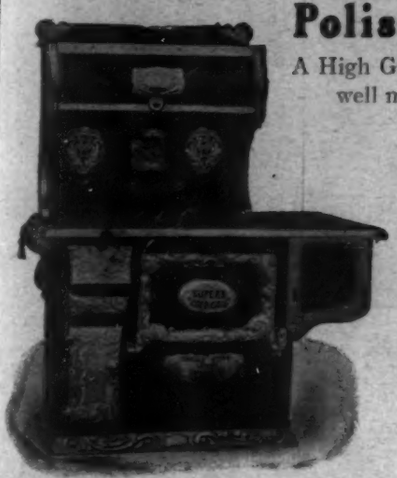
For High Grade Base Burners

EUGENE MUNSELL & CO., The Mica Headquarters

NEW YORK, 68 Church Street **CHICAGO, 358 Dearborn Street**

The Superb Gold Coin

Polished Steel Range



A High Grade up-to-date range thoroughly well made and highly ornamented.

FEATURES

The Fire Box linings are corrugated giving the greatest heating surface possible.

The Oven is large and can not buckle or warp.

The Ash Pit is large.

The Top is furnished with interchangeable key plates permitting seven, eight or nine inch covers.

The Reservoir Casing is all cast iron rust-proof.

This is a beautiful range that will sell wherever shown.

Catalog sent upon request.

CHICAGO STOVE WORKS

Blue Island Ave. and 22nd Street, **CHICAGO, ILLINOIS**

The MONITOR RADIATOR

BASE BURNER WITH FIVE FRONT FLUES

has *1683 Square Inches* more Radiating surface than any other Base Burner made.

THE BIGGEST SELLER ON THE MARKET

You should secure the Agency at once. *Write today to*

PAXTON & GALLAGHER CO., Omaha, Neb.

Exclusive Distributors for the West

Klymax

Laundry Heaters

Cost but a few cents a day to operate and will last a lifetime

BURNS HARD OR SOFT COAL ECONOMICALLY

MADE IN FOUR SIZES

FULLY GUARANTEED

The Popular "Little Giant"

A combined Laundry and Tank Heater. Has room for 15 to 20 average size irons. Capacities 50, 85, 125 and 225 gallons per hour. Other styles in larger sizes.

An absolute necessity for providing plenty of hot water in hotels, residences, stables, barber shops, laundries, garages and in fact any place where a quantity of hot water is required. Has large flat top, useful for many purposes. We solicit your inquiries and orders.

Send for our Tank Heater Catalog and Prices

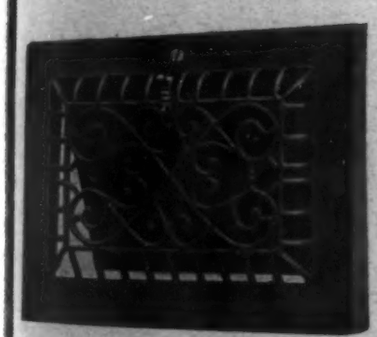
Kellogg-Mackay-Cameron Co.

1250 Michigan Avenue
CHICAGO

Minneapolis **Seattle**

Walworth Deflecting Wall Registers

FOR BASEBOARDS



Can be used on a "Double Head."

This register takes the place of the convex, and costs less money.

It takes up no room in the wall pipe, has a face of large open area, is made in standard sizes, fits regular stock sizes of fittings, is equipped with a wall frame and is attached to the pipe in the same manner as the ordinary valve register.

Our registers are made in **THREE STYLES**, Vertical, Horizontal, and Baseboard. We are also makers of the famous **SEMI-STEEL** Floor and Convex Register. all sizes and finish.

Let us quote you prices.

FOR SIDE WALL

The Walworth Run Foundry Co.

2485 WEST 27TH STREET, CLEVELAND. OHIO.

RED CROSS RANGES, STOVES and HEATERS

AT PRICES NEVER BEFORE OFFERED

Size	Name	Regular Price	Our Price
9-18	Victor Res	$40.29	$32.25
8-20	Victor Res	43.29	34.75
9-20	Victor Res	43.29	34.75
9-16	Princess Square	25.53	21.75
9-16	Princess Res	31.53	26.80
9-18	Princess Res	34.53	29.30
9-20	Princess Res	37.53	32.00
9-18	Tribune Square	24.50	20.75
9-20	Tribune Square	27.50	23.35
9-16	Tribune Res	27.50	23.35
9-18	Duchess Square	28.53	23.00
8-18	Imperial Square	35.23	30.00
8-20	Imperial Square	38.68	33.00
9-20	Monarch Square	29.25	25.00
8-18	Monarch Res	31.50	25.25
8-18	Monroe Square	26.00	22.00
9-20	Monroe Square	27.73	22.25
8-18	Monroe Res	30.00	24.00
8-20	Model Square	27.70	22.25
9-20	Model Square	27.70	22.25
8-18	Model Res	30.00	24.00
8-20	Model Res	32.93	26.50
8-18	Herald Res	28.10	24.00
8-18	Regal Square	23.15	19.75
9-18	Regal Square	23.15	19.75
8-20	Regal Square	25.90	22.00
9-20	Regal Square	25.90	22.00
8-18	Regal Res	28.15	24.00
9-20	Regal Res	30.90	26.25
48-21	Talisman Square	20.75	16.75
49-21	Talisman Square	20.75	17.75
48-23	Talisman Square	23.50	18.75
49-23	Talisman Square	23.50	20.00
68-23	Talisman Square	25.60	20.50
48-21	Talisman Res	25.75	20.60
49-21	Talisman Res	25.75	22.00
48-23	Talisman Res	28.50	23.00
49-23	Talisman Res	28.50	24.25
68-23	Talisman Res	30.60	24.50
69-25	Talisman Res	33.35	28.35
9-21	Challenge Square	22.25	19.00
320	Oak for Wood	23.38	20.00
314	Oak for Coal	17.05	14.50
34	Oak for Coal	19.80	17.00
36	Oak for Coal	22.00	18.75
24	Oak for Coal	18.15	15.50
120	Oak for Wood	21.38	18.25
116	Oak for Coal	17.05	14.50
114	Oak for Coal	14.73	12.50
181	Oakleaf	18.00	15.50
141	Oakleaf	14.50	12.35
121	Oakleaf	12.75	10.85
14	Badger Oak	8.00	7.20
16	Badger Oak	8.75	7.85
116	Gem Laundry	7.88	6.30
780	Laundry	3.25	3.00
10	Hero Cylinder	3.60	3.25
15	Jewell	16.00	13.50
15	Jewell 1½ sheet	16.75	14.25
17	Jewell 1½ sheet	18.25	15.50

Size	Name	Regular Price	Our Price
9-18	Rival Square	$20.23	$17.25
8-20	Rival Square	23.65	19.00
9-20	Rival Square	23.65	20.00
9-20	Rival Res	29.28	25.00
8-18	Ideal Square	21.50	18.25
9-18	Ideal Square	21.50	18.25
8-20	Ideal Square	24.25	20.75
9-20	Ideal Square	24.25	20.75
9-22	Ideal Square	27.00	23.00
8-18	Ideal Res	26.50	22.50
9-18	Ideal Res	26.50	22.50
8-20	Ideal Res	29.25	25.00
9-20	Ideal Res	29.25	25.00
9-22	Ideal Res	32.00	27.25
8-21	Champion Square	20.00	17.00
9-21	Champion Square	20.00	17.00
8-23	Champion Square	22.75	18.25
9-23	Champion Square	22.75	19.25
8-19	Champion Res	22.25	18.00
8-21	Champion Res	25.00	21.25
9-21	Champion Res	25.00	21.25
8-23	Champion Res	27.75	22.25
9-24	Eclipse	30.00	24.00
8-20	Laurel Square	22.68	18.25
9-20	Laurel Square	22.68	18.25
8-18	Laurel Res	25.30	20.25
8-20	Laurel Res	28.50	23.00
9-20	Laurel Res	28.50	23.00
8-20	Mascot Square	16.25	13.85
9-20	Mascot Square	16.25	13.85
9-22	Mascot Square	19.00	16.25
8-18	Mascot Res	18.50	15.75
9-20	Mascot Res	21.25	18.00
9-22	Mascot Res	24.00	20.50
9-20	Gem Square	15.00	12.75
9-22	Gem Square	17.90	15.25
8-22	Gem Res	23.10	19.75
9-22	Gem Res	23.10	19.75
9	Firewitch Res	19.00	15.25
88	Banner Square	19.00	15.25
9	Banner Res	25.00	20.00
24	Triumph	18.25	15.50
24	Triumph Grate & Pan	19.50	16.50
26	Triumph Grate & Pan	21.88	18.50
31	Sylvan	10.63	9.00
41	Sylvan	10.63	9.00
43	Sylvan	12.75	10.85
45	Sylvan	15.13	12.85
141	Sylvan	12.75	10.85
133	Sylvan	15.13	12.85
145	Sylvan	17.00	14.50
243	Sylvan	18.75	16.00
123	Cottage	18.00	14.50
125	Cottage	19.00	15.25
21	Ontario	6.38	5.50
23	Ontario	7.88	6.75
25	Ontario	9.13	7.75
18	Warwick	5.50	4.75
36	Box Stove	8.00	7.25

Write us to-day for particulars

J. P. LINDEMANN & SONS, 5000 State St., Milwaukee, Wis.

To The American Artisan,
Chicago, Ill.

Your Paper is the best of its kind in the market. I received thirty-six letters during the past three weeks from parties looking for tinners and plumbers. Many thanks for the ad.

P. C. Westphal,
Paynette, Wisc.

Magee Illustration No. 4

Magee Everett Furnace

The cheapest furnace on the market, and yet it has the **MAGEE** characteristics, **quality of material and thoroughness of workmanship.**

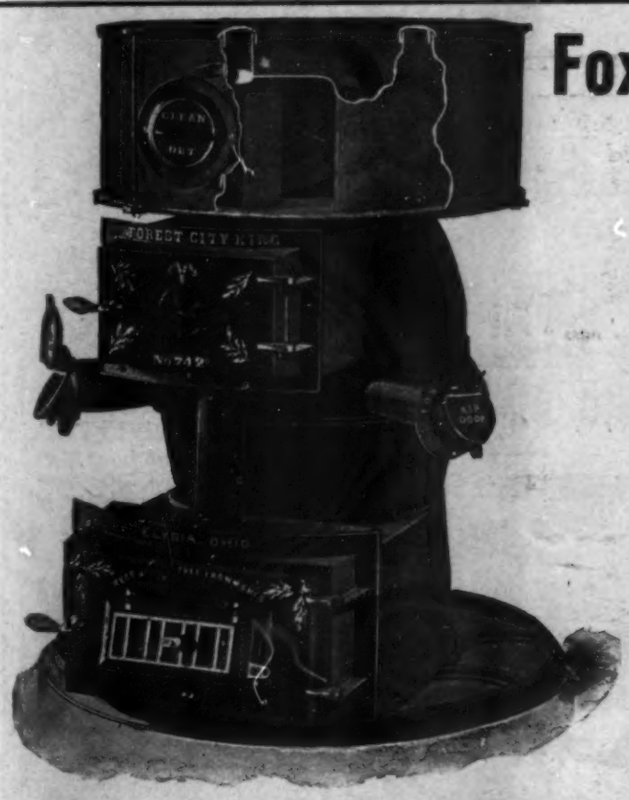
The design is simple, but nothing is omitted that tends to efficiency.

Ample ash pit—the **only** grate, the Dock-Ash. Broad dome shaped combustion chamber, and a large revertible flue radiator.

This furnace is made in **three sizes,** and the prices will astonish you.

A word to furnace men:—If the **Magee** line is not represented in your city, don't waste a minute, **write now to**

MAGEE FURNACE CO., 86 East Lake Street, Chicago



Fox Smoke Consumer

Do you use soft coal? **THE FOX FURNACE COMPANY** has the only successful smoke consumer. To consume smoke you want to bring the air into the furnace in a heated condition over the top of the fuel to burn the smoke that has left the fuel unconsumed. **THE FOX** does it. When you bring air through the fire pot or below the top of the fuel you only convert more fuel to smoke at the expense of the coal, the same as you do when you raise your draft door, but you do not consume any of the smoke. You can close the air doors and it converts **THE FOX** back into a hard coal or wood furnace.

Don't you think that is good?

Write for catalogue and we will tell you all about our furnaces and send prices that you will find will save you dollars.

OUR MOTTO IS "QUALITY"

THE FOX FURNACE CO., Elyria, Ohio

The 5th in a Series of Reasons Why the KELSEY is the Best Warm Air System

Comparative Cost and Comparative Results —Hot Water and the Kelsey System

Much has been said, and more has been written, about the "advantages" Hot Water Systems have over warm air heating.

But when you get right down to hard pan, and look at the bare facts,—here they are:

—The very first cost for Steam or Hot Water is much more than for the KELSEY Warm Air System.

—The cost for maintenance is much higher because radiators and joints *will* leak,—boiler sections *will* crack, expansion tanks *will* overflow.

—Further, the expense of fuel is higher. It has been completely demonstrated by careful, painstaking tests that from 15% to 35% more fuel is necessary to heat a given building by hot water than by the KELSEY Warm Air System.

—With Steam or Hot Water systems as universally installed, there is no provision whatever, made for ventilation. The same air is heated over and over again.

—With the KELSEY Warm Air System, pure, fresh outdoor air is warmed to the proper temperature and then evenly distributed throughout the building,—regardless of location of the rooms, direction of the wind or general exposure.

—With the KELSEY System, the air is invariably like that of a balmy June morning,—the cost for installation, and the cost for fuel and maintenance are lower than for steam or hot water,—the KELSEY is much easier to regulate and manage.

Hundreds of dealers have found that when the many advantages of KELSEY Heating are clearly explained to the prospective buyer that it's easy to make sales,—no matter what the competition may be.

And the reputation of the KELSEY is growing so rapidly that KELSEY business is bound to continue to increase.

Do you want the Exclusive Agency for the *Ideal* Heating System,—

The KELSEY Warm Air GENERATOR?

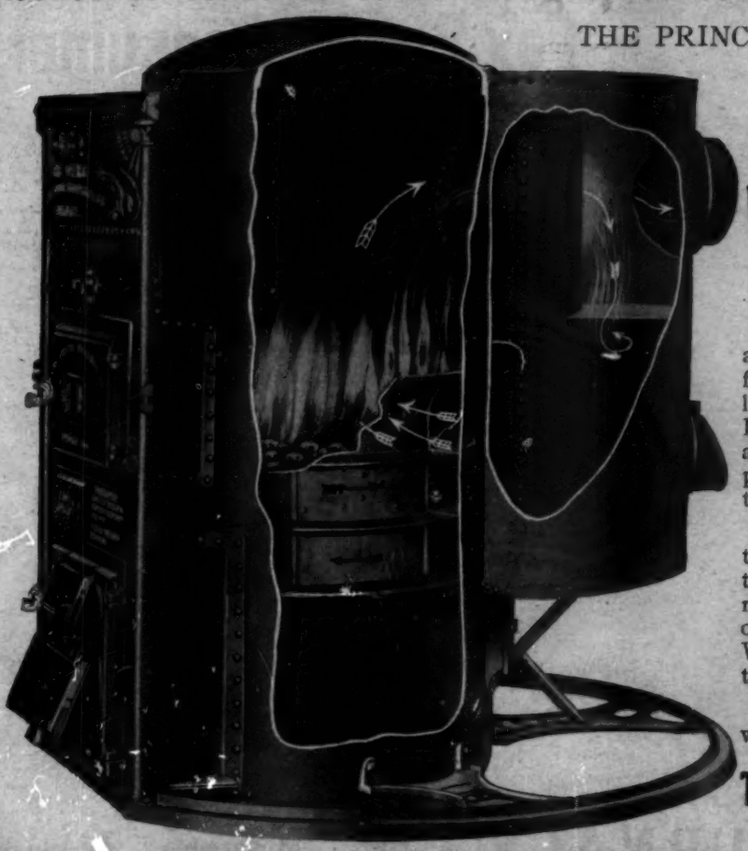
(Registered in U. S. Patent Office)

KELSEY HEATING COMPANY

SYRACUSE, N. Y.

NEW YORK: 156 Fifth Ave. **CHICAGO: Van Evera & Lewis Mfg. Co., 104-106 W. Lake St.**

James Smart Mfg. Co., BROCKVILLE, Ont., Sole Makers for Canada



THE PRINCIPLES OF

Gas and Soot

burning are perfected in the

WEIR ALL STEEL FURNACE

and in the WEIR only; and furthermore it is the only absolutely and permanently Gas and Dust tight furnace made. These are strong assertions but comparisons will ably prove their truth.

Other manufacturers have tried to imitate the WEIR, but their productions never have and never will reach that high point of excellence which makes the WEIR the very best furnace that can be produced.

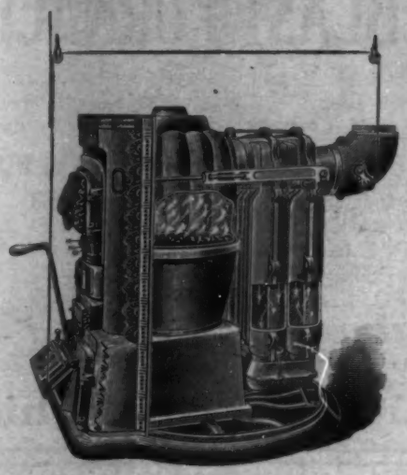
We have a new catalog which will interest you. Write for it.

The Meyer Furnace Co.

Peoria, Ill.

BENGAL

ALL CAST IRON FURNACE



Most Powerful and Compact Furnace Ever Produced

Burns perfectly Anthracite or Bituminous Coal or Coke. Has solid cast front and deep ash-pit.

EITHER DRAW-CENTRE, ANTI-CLINKER GRATE OR TRIPLEX GRATE which can be drawn out through ash-pit.

Adapted to all kinds of cellars as **they stand but 42 to 50½ inches high** from the floor to top of upper casing ring, allowing plenty of elevation for hot air pipes.

HAS MORE RADIATING SURFACE THAN ANY OTHER FURNACE OF THE SAME SIZE.

WRITE TODAY FOR COMPLETE DESCRIPTIVE MATTER.

THE FLOYD-WELLS CO. ROYERSFORD, PA. 83 Kinzie St., CHICAGO, ILL.

Clean and Tight Like a Boiler

We have erected a new factory in which we installed a 13 ton riveting machine, with which riveting is done by pressure rather than by hammering. This insures all the joints of

American Furnaces

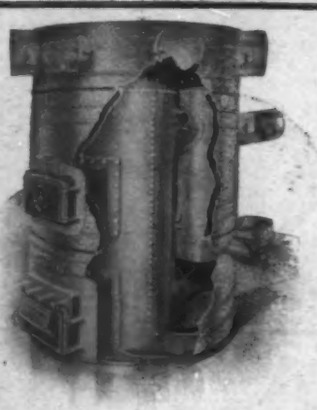
being absolutely tight.

DEALERS: A Sample Furnace will be shipped to any responsible dealer in the United States and if after careful examination (we allow you 30 days) it does not prove entirely satisfactory, it can be returned at our expense.

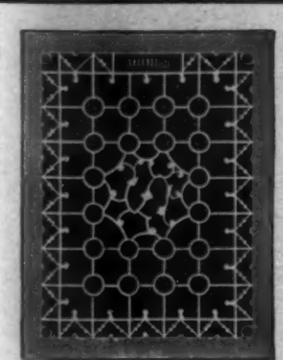
If you are looking for something better, do not fail to investigate.

THE AMERICAN FURNACE CO.

1911-15 Pine Street, ST. LOUIS, MO



CUT SHOWING DOUBLE CASING.



FLOOR REGISTER.

REGISTERS OUR DISCOUNT 80 and 5%

We are makers of High Grade, All Cast, Warm Air Registers:

Floor Registers
Convex Wall Registers
Convex Circular Top Registers
Circular Top Registers
Round Registers
COLD AIR FACES

FINISHES
Black Japan
White Japan
Nickel Plated or Bronzed
Electro Plated in Brass, Bronze or Copper

Why buy the semi-steel or modified Steel Register? They are only imitations. Leading Architects demand the All-Cast Registers in first-class buildings.

We are not assemblers; we are makers. Our own foundry with capacity of 200 Molders. Not in the Association. Write for Catalog.

STANDARD REGISTER CO., Dept. of THE STANDARD FOUNDRY & MFG. COMPANY CLEVELAND, O.

AKRON AIR BLAST FURNACE.

Perfect Ventilation. Plenty of Pure, Warm Air, and Small Coal Bills

ARE ASSURED EVERY USER OF THE

AKRON AIR BLAST FURNACE

Its many distinctive features, combined with ALL the most practical features of modern Furnace Construction, have made **The Akron Air Blast** the Best Furnace on the market to-day.

Best for YOU to SELL; Best for your CUSTOMERS to BUY

A Few Selling Points:—It is the STRONGEST and MOST DURABLE, making it the CHEAPEST. It is the EASIEST and MOST SIMPLE to Operate. Burns ANY kind of Fuel. Is CLEANEST. Has the BEST GRATE, STRONGEST FIRE POT, and the ONLY CENTER DRAFT DIVING FLUE.

WRITE FOR CATALOG AND PRICES

THE MAY-FIEBEGER CO., Akron, Ohio

FURNACE WITH CAST FIRE POT.

800 MARVEL HEAT PRODUCERS **Series**

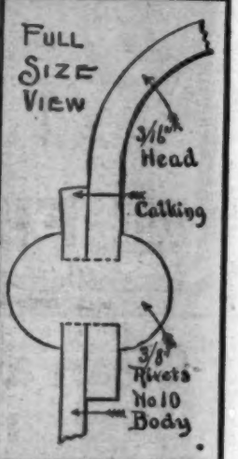
BETTER FURNACES

Large Powerful Heating Surfaces.

Two-Piece Cast Iron Pot.

Flat Dumping and Shaking Grate, or Marvel Triangular Bar Grate.

Large Feed Door. **Well Made.**



WRITE FOR CIRCULAR.

INTERSTATE MANUFACTURING COMPANY

OSKALOOSA, IOWA

A Good Warm Air Furnace

Properly installed, will heat a house more satisfactorily and more economically than hot water, steam or stoves.

The foregoing statement can be proven if you will sell BOOMER FURNACES and get our ideas about installation.

No one has ever made any money out of light, cheap furnaces; 95% of the consumers will pay the price when value can be shown, after which, no trouble. Let your competitors have the other 5% and the trouble.

Be honest now, are you drifting into the 5% class, or are you going to handle BOOMERS? Get our attractive BOOMER proposition immediately.

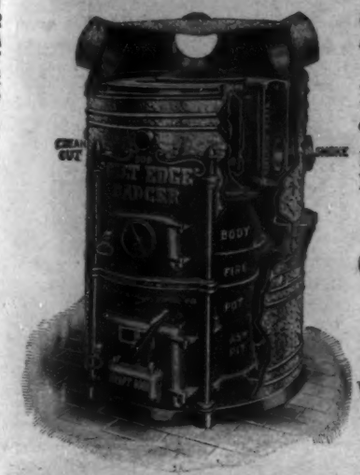
The HESS-SNYDER COMPANY

Manufacturers :: MASSILLON, OHIO

ILLUSTRATED CATALOG FREE WRITE FOR IT

GILT EDGE WARM AIR AND COMBINATION HEATERS LEAD. SCHWAB SIDE WALL REGISTERS ARE BUILT BETTER THAN OTHER MAKES.

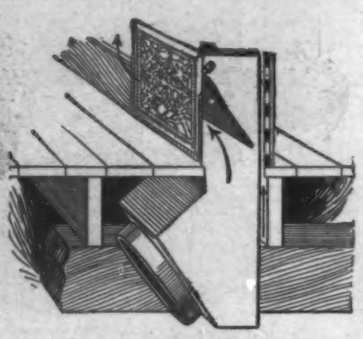
SELL THE GILT EDGE FURNACES and SCHWAB SIDE WALL REGISTERS



From the first design to the finished product our goods are made in our own factory and under our own supervision. They are without competition in quality and construction. Over thirty years of experience have proved that the principles of construction are correct.

Our Complete Facilities Are at Your Service

We welcome your careful investigation of our products.



R. J. SCHWAB & SONS CO., Milwaukee, Wis.

GILT EDGE FURNACES FOR ALL FUELS. SCHWAB PIPE AND FITTINGS DO FIT—USE THEM—PRICE RIGHT TOO.

BOOKLET MODERN METHODS FREE WRITE FOR IT

A New Low-Down Crown Cast Iron Warm Air Furnace

Less the all cast front. For hard or soft coal. Very powerful. All parts extra heavy, and adapted to severe usage. Price such that it CAN BE SOLD AT A PROFIT in any territory.

MADE IN THE FOLLOWING SIZES:

Sizes.	Diameter of Casings.	Diameter of Firepot.	Height of Castings—less feet.	Diameter of Smoke Pipe.
No. 132	32 inch	18 inch	43 inch	7 or 8 inch
No. 136	36 inch	21 inch	45 inch	7 or 8 inch
No. 140	40 inch	23 inch	48 inch	7 or 8 inch

Furnished with Feet and Front Support when Desired.

WRITE FOR CATALOG. *EVERYBODY LIKES THIS FURNACE.*

The MARCH-BROWNBACK STOVE CO.

Makers of "Low Down" Furnaces. POTTSTOWN, PA.

CELLULAR OVERDRAFT FIREPOT

Found Only In Our Furnaces

THE BONNOT COMPANY CANTON, OHIO

Mimco Solderless Couplings

NO SOLDER (Patented) NO SOLDER

Do away entirely with wiping joints. A practical article and BIG SELLER.

Send for Descriptive Circular and Price-List.

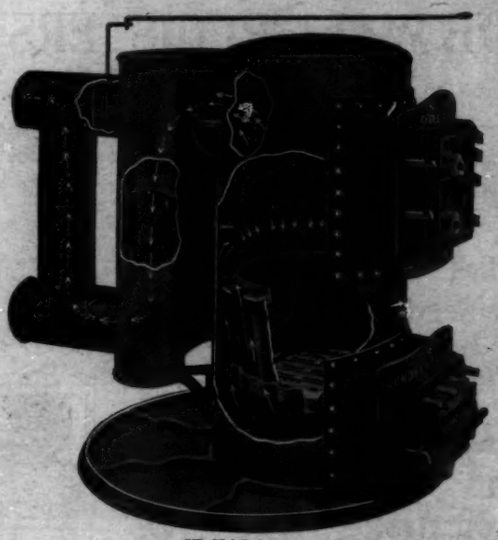
MODERN IMPROVEMENTS MFG. CO.

468-470 17th Street • BROOKLYN, N. Y.

F. D. Burgess, Waupaca, Wis., writes:

"Please take out advertisement for Tinner, I have one in sight that I think I shall get. I have had all kinds of letters from men in this state, Ills., Iowa and Minnesota. I am running tin and plumbing shop here in connection with the Union Stove Co."

Your Customer for a Furnace



will ask you about the advantageous features of the furnace you are trying to sell him. He wants the best. Will you be able to point out as many good features on your furnace as you would if you were handling

Green's Base Heater Furnace?

It is made of one piece of steel from top to bottom. The heads in the body and radiator are riveted in with a 20-ton press, the rivet is crushed and forms an absolutely tight seam. Built just like a boiler. A seam which will not allow steam to escape will be proof against gas and smoke.

It is provided with a slotted fire pot which admits the heated air to the combustion chamber and burns the gas and smoke. It removes the dirt and reduces coal bills.

The ashes can not accumulate behind the bowl, the air constantly passes over it both inside and outside and consequently it will not burn out as cast iron linings do.

IT HAS An unusually large radiator; A direct draft for starting fires quickly; Double feed doors; Hollow grate bars, each of which operates independently of the others; Water coil pocket.

Don't you want to sell a high grade furnace which can be purchased at a reasonable price?

Write for Our New Catalogue

Green Foundry & Furnace Works

Lincoln Stove Repair Co., Lincoln, Neb., State Mgrs. for Nebraska
Rowe Const. & Heating Co., Watertown, S. D., State Mgrs. for S. Dakota

Dept. "A" Des Moines, Iowa

A-B Liquid Stove Polish

A Varnish Polish to Be Used Only on Cold Stoves.

Smokeless and Odorless

Over 1,000,000 Bottles used annually in Chicago.

A-B

This is a pure oil polish that will not freeze.

Contains no soap or sticky gum, and an old newspaper or rag will shine it.

A Brilliant Polish that will not chip off!

We make the BEST Metal Polishes and Iron Enamels on the Market.

A-B **POLISH CO.**

8-14 Haddon Ave., CHICAGO, ILL.

We Make It!

The BEST Air Drying Iron Enamel Made.

Try a 1-Dozen Case From Your Jobber.

Nickel Plate Stove Polish Co.
CHICAGO.

Large 10 oz. Can.

THE FORAMINOUS Fire Plate Cover

makes soft coal generate gas which lights and burns in blue or crimson flame jets above Fire Plate and makes a heating stove which formerly only heated one room heat four or five rooms in the coldest weather for from eight to ten hours at one firing. Guaranteed to make a heating stove with an 18-inch fire bowl heat four 16-foot rooms. Write for descriptive circular and prices. Manufactured and for sale by

P. J. MOONEY, Patentee
BRAZIL, INDIANA

There must be a Damper in the stove pipe

ANY SIZE ANY STYLE

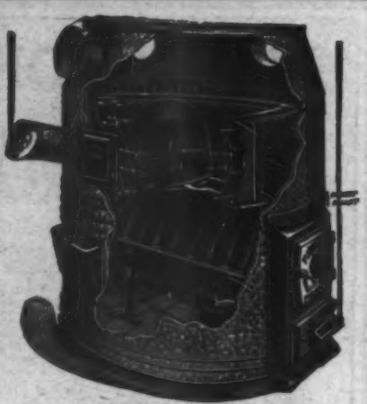
But Only One Quality—THE BEST

THAT IS WHY THE

FLORAL CITY FURNACES

have occupied the proud position of leaders in furnace construction for years.

For **durability, economy, power** and **satisfactory service,** this line is without an equal, and as long as quality is considered, it is sure to retain its place at the head.



Write For Our Latest Catalogue.

MONROE FOUNDRY & FURNACE CO., MONROE, MICHIGAN.

Simplicity, Durability, Economy and Capacity

All of which are essentials of the really Good Furnace, are featured in the

MONCRIEF

TOP RETURN FLUE WARM AIR **FURNACE**

This is a furnace which is unsurpassed for operation and durability.

FEATURES: Burns all grades of hard and soft coal; all cast iron; Moncrief Duplex Grate; large radiating surface; double fire-pot; large grate surface and cleanliness in use. Write for catalogue.

Henry & Scheible Co., 825-29 Long Ave., N. W. CLEVELAND, OHIO

J. C. KIMMEL, 1314 E. 15th St., Kansas City, Mo., Western Sales Agent

THE CHAMPION

Hot Water Combination Boilers

THEY FIT ANY FURNACE

They fit close into the dome and have an open front at fire door. In small heaters base section can be used alone. One or more rings may be added for additional capacity to be determined by the amount of hot water radiation to be used. All joints absolutely tight.

WRITE FOR CATALOGUE.

FRANK D. STOLZ, Manufacturer

156 Webster Ave., CHICAGO, ILL.

The FUEL$AVER

Will Add $75 to $750 to Your Profits

¶ It's a new automatic heat regulator for furnaces. Keeps the temperature uniform. Reduces the coal bill 25%. Low in price and pays a big profit.

¶ Write for particulars today.

F. D. KEES MFG. CO., Beatrice, Nebr.

The Ideal Epworth Acetylene Co.

INCORPORATED

Write for Circulars and Terms

The Ideal Epworth Acetylene Generators

Are Ideal in construction, Ideal in light producing power, Ideal in giving out steady light, Ideal in selling qualities, Ideal in lighting Dwellings, Stores, Hotels, Churches and Towns. Acetylene light is the safest, best, cheapest, brightest, finest light in the world, when produced in the Ideal Epworth Generators.

Satisfaction Guaranteed. Agents Wanted.

IDEAL EPWORTH ACETYLENE CO., JOHNSTOWN, PA.

(Successors to Epworth Gas, Light & Heating Co., Waterloo, Iowa) WATERLOO, IOWA

Put That Advertisement in **THE AMERICAN ARTISAN** If You Want Results

MAKE MORE MONEY

That's easily done—install Improved Handy Furnace Pipe. It pays the dealer a larger profit than any other because he can

SAVE MORE TIME

and time means money, every time. Improved Handy Furnace Pipe can be practically thrown together. The one end is ½-inch larger than the other, and it has the longest slip of any double wall pipe made—therefore you can

SAVE MORE LABOR

Improved HANDY FURNACE PIPE

Improved Handy Furnace Pipe is absolutely the very best on the market today.

Send for Samples.

All other lines, such as Round Pipe Elbows, Registers, Asbestos, etc., etc., are complete. Our shipping facilities are unsurpassed.

Send for Catalog.

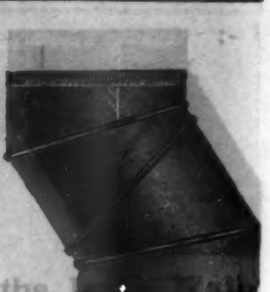
F. MEYER & BROTHER CO., Peoria, Ill.

The MICHIGAN SAFETY FURNACE PIPE COMPANY

Corner Brooklyn and Abbott Streets,
DETROIT, MICHIGAN.

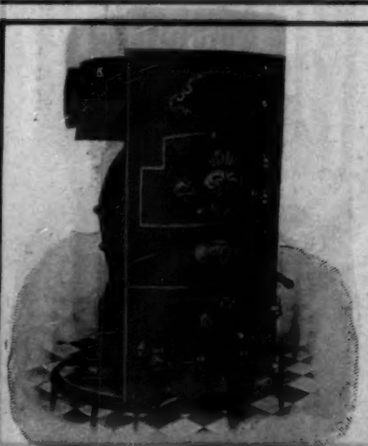
Manufacturers of A PERFECT HOT AIR FURNACE PIPE, SAFETY WALL PIPE, SINGLE PIPE and FITTINGS in both Tin and Galvanized Iron.

WRITE FOR OUR LATEST CATALOG.



We Make the Only Sectional Furnace Pipe in which the Inner Walls Form the Cross Walls.

No Wings to Pull Out. No Cleats to Bend.



OUR NEW DE HAVEN ALL CAST FURNACE

Strictly Modern and Up-to-Date in Every Respect

All the latest features in modern furnace construction are embodied in the make-up of this furnace.

FEATURES: Extra Heavy; Gas Tight; Burns all grades of Hard Coal, Soft Coal and Wood; Simple and Economical to Operate; Top Return Flue Radiator; Large Radiating Surface; Roller Bar Grate.

Write to-day for Catalog and Prices.

Youngstown Furnace & Supply Company

NILES, OHIO

Manufacturers of the Celebrated LION-APEX and BESSEMER Series of Furnaces.

Chicago Branch
218 East Lake Street

ROOD & McINTYRE
Kansas City, Mo., Southwestern Distributers

Our Strictly New Furnace

Built to the Hour

A Powerful Perfect Worker

OUR NEW ONE

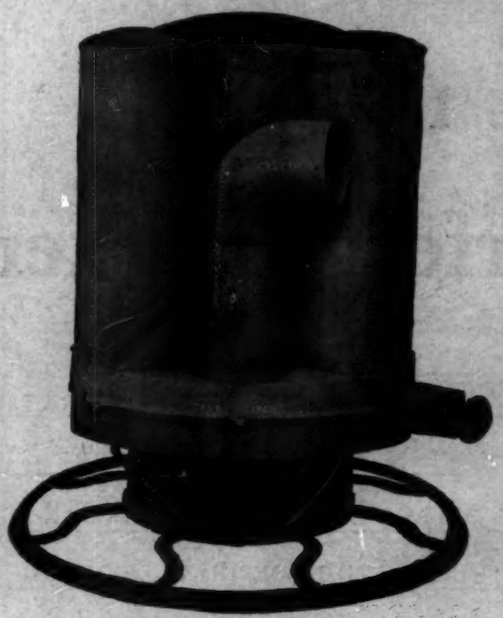
WHATEVER IS GOOD, NEW AND MODERN IN FURNACE MAKING HAS BEEN CONSIDERED IN THE PLANNING AND BUILDING OF THIS FURNACE. * HEAVY STEEL PLATE IS DESIRABLE FOR QUICK HEATING WE HAVE IT IN THE LARGE RETURN RADIATOR. * HEAVY CAST IRON IS DESIRABLE FOR DURABILITY IN FIRE SECTION, WE HAVE IT THERE. * LARGE DOORS ARE DESIRABLE, WE HAVE MADE THEM LARGE. * PROMPT RELIABLE ACTION IS ESSENTIAL, THEY ARE HERE CORRECTLY AFFORDED.

THERE IS NO MORE SATISFACTORY FURNACE THAN THIS. THEY MAY TIE IT BUT THEY CAN'T BEAT IT. HEAVY STEEL HIGH RETURN RADIATOR WITH CAST TOP AND BOTTOM. ASBESTOS PACKED JOINTS EVERYWHERE. BIG FIRE-POT, BIG ASH-PIT, BIG CLEAN-OUT, BIG DOORS GROUND TO PERFECT FITTING. HEAVY SEPARATE GRATE BARS. DUST TIGHT. GAS TIGHT. A VERY COMPLETE MODERN FURNACE THAT WILL SATISFY BOTH YOU AND YOUR CUSTOMERS

WALTER S. RAIT & CO.

211-213 Lake Street, CHICAGO, ILLINOIS.

We Hear a Great Deal Concerning



Rear View of Front Rank.

The Uplift in The Furnace Business

Those who make and install inferior furnaces find their occupation gone in any and every locality where

FRONT RANK STEEL FURNACES

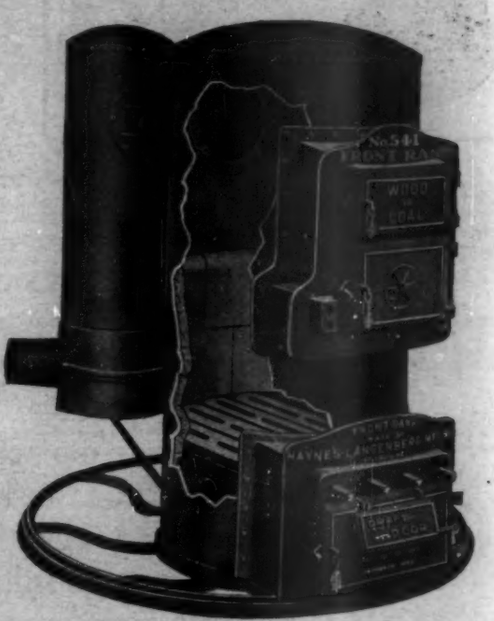
are known.

A few may want low grade apparatus until they have learned the superior advantages of **FRONT RANK FURNACES.**

No one can make as good a furnace as the **FRONT RANK** cheap.

No one can make a better furnace than the **FRONT RANK** at any price.

The demand for the best furnace made has grown to such proportions we have been compelled to open a Branch Office and Salesroom in Chicago, where a full and complete line of **FRONT RANK** Steel Furnaces will be carried in stock.



Prompt shipments and courteous treatment at both St. Louis and Chicago

Write Today for Catalog and Printed Matter

HAYNES-LANGENBERG MFG. CO.

4045-4057 Forest Park Blvd., St. Louis, Mo. 211-213 Lake Street, Chicago, Ill.

ESTABLISHED 1880.

THE AMERICAN ARTISAN & HARDWARE RECORD

Representative of the Stove, Tin, Hardware, Heating and Ventilating Interests.

PUBLISHED EVERY SATURDAY.

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS, (Invariably in advance): ONE YEAR, POSTAGE PAID, $2.00.
IN FOREIGN COUNTRIES INCLUDING CANADA, ONE YEAR, POSTAGE PAID, $4.00.
Address all Letters, Communications, and Remittances to

DANIEL STERN, PUBLISHER AND PROPRIETOR,
355 DEARBORN STREET, CHICAGO, ILL.

Entered as Second-Class Matter June 25, 1885, at the Post Office at Chicago, Illinois, under Act of March 3rd, 1879.

THIS PAPER IS A MEMBER OF THE CHICAGO TRADE PRESS ASSOCIATION.

CHICAGO, SEPTEMBER 26, 1908.

COMMERCIAL failures last week in the United States as reported by R. G. Dun & Co. were 246, against 206 the preceding week and 196 the corresponding week last year. Failures in Canada numbered 26, against 18 the preceding week and 31 last year. Of failures last week in the United States, 98 were in the east, 64 south, 62 west and 22 in the Pacific states, and 71 reported liabilities of $5,000 or more, against 80 last week.

IN an opinion filed on September 16 the Michigan Supreme Court sustained the constitutionality of the maximum freight rate law of 1872, which has been ignored by the railroads as obsolete and denounced by them as unjust, unreasonable and confiscatory. The law provides a fixed rate for carrying freight in car lots for short distances, a rate of $8 for transporting a car ten miles being provided regardless of the character of the freight.

NOTABLY increased activities in a number of lines of industry in the United States are shown in the recent report of the Bureau of Statistics of the Department of Commerce and Labor. There is a considerably heavier live-stock movement reported for the seven months ended with July than for the corresponding period of either of the two immediately preceding years. Grain receipts for July increased over the preceding month and also over July of last year. Lumber and coal movements, as well as the production of iron, continue to show marked advances over the preceding months of the year. More than 70 per cent of the reporting car associations show gains over the preceding months of the current year. With returns from forty-five leading cities the building operations for July showed a small gain over the remarkably large business of July of last year. Trunk-line grain shipments of 11,633,000 bushels for July largely exceed those for July of last year. Coal and coke traffic over seven eastern coal-carrying roads during July, 1908, aggregating 9,961,996 tons, was far in excess of the preceding month's totals.

THE National Conservation Commission has just made public the first of its schedules on which the inventory of the country's natural resources is being conducted, and it indicates an intention to hunt down waste in all its forms and to devise some means to prevent it. The schedule relating to lands inquires into waste of soil by erosion. That schedule also suggests waste through "bad agricultural methods." The schedule goes into waste in the carrying capacity of the public range in the West. The section on waters is inquiring how much land capable of irrigation is wasted by not being irrigated. More important still is its suggestive inquiries tending to show that the country is wasting its waterways to an alarming extent by not using them as it should. Perhaps the greatest form of waste brought out in the entire schedule is that relating to water power. Two of the inquiries are as follows: "Are existing developed water powers put to their full use?" "To what extent can coal be saved by the substitution of water power?"

Consular Service Criticized.

THAT there is a general impression among business men interested that the consular service of the United States is not as efficient as it might be, is the deduction of the *American Exporter* of New York City, from replies received in response to inquiries it has made. That journal recently sent out a circular letter to a great number of manufacturing concerns throughout the country, asking them questions bearing on the general subject of the efficiency and usefulness of the service. Some 350 replies came from concerns manufacturing and exporting machinery, railway supplies, clothing, bicycles, typewriters, athletic and sporting goods, lumber, carriages, furniture, agricultural implements, hardware, cotton goods, automobiles, electrical apparatus, groceries and other products.

In the letter sent out the following questions were asked:

"Do you receive and read the Daily Consular and Trade Reports sent out by the Department of Commerce and Labor?

"Have you found the suggestion made by consuls regarding your line of value or otherwise?

"Have you followed up any of the 'Foreign Trade Opportunities' in your line, and if so, have the inquiries there mentioned generally proven serious or otherwise, and has any actual business resulted?

"As far as your line is concerned do you consider that the Daily Consular and Trade Reports are of value to American commerce, and do you find that the subject matter in general bears evidence of being written and edited by men who are conversant with industrial and commercial subjects or otherwise?

"Have you found that there is any marked difference in the value of reports in the Daily Consular and Trade Reports written by special agents of the Department of Commerce and Labor as compared with those of the consuls?

"From what class of men do you think the consular corps should be recruited, and what special training do you consider that they should have to be of value to the country's export interests?"

Commenting on the replies received from the manufacturers in question, the *American Exporter* express-

es the belief that an improvement in the consular service is needed for the benefit of the commerce of the country. In this connection the paper says:

"The receipt of fully one-half of the total number of replies urging the appointment of business men or of men who have had business training and experience is spontaneous and correspondingly noteworthy. A total of 126 manufacturers out of 259 replying on this subject who urge that consuls be selected from men of manufacturing or commercial experience, seems to be an emphatic indication of the desires of this class of the community, which, after all, is the one above all others which it is expected that the increasingly commercial character of the consular service will benefit. It is altogether probable that were the specific question as to the selection of men with business training, or men with merely scholastic or professional training, put before the manufacturers of the United States, the reply would be to all intents and purposes unanimous in favor of the requirement of business training."

Only two manufacturers, it is said, declared themselves satisfied with arrangements as they stand, and only one man said that he favored the selection of consuls on political and partisan lines.

The replies showed that about a third of the manufacturers do not receive the consular reports. Out of 186 replies to the question whether valuable suggestions had been found in the reports 83 were in the affirmative. Thirty-seven complained that their particular business had never been treated in the reports. Seventy manufacturers, or 40 per cent, of those answering in this regard, replied that they found nothing of value to them in the suggestions of the consular reports. More than 100 manufacturers were emphatic in replying that they considered the reports of value to American commerce.

About half of those replying to the question relating to fitness of the writers for dealing with their subjects answered in the affirmative and a small number said that the articles were not written by competent men. One hundred and three manufacturers replied that they had followed up foreign trade opportunities, but only 20 of these had secured new business thereby.

It is important to American firms engaged in the export trade that the consular service of the United States should be of high efficiency. Dr. Richard D. Harlan of the George Washington university at the national capital is inviting the exporting firms of this country to assist with money in building up the special consular training school connected with that institution. In asking each firm to send to him for the use of the school $200 a year for five years he calls attention to the fact that the success of the institution is likely to lead directly to a marked improvement in the government aids to American foreign trade.

This is no uncertain venture. The school is established, but its running expenses have to be met while the benefits which it offers are being demonstrated to those who have need of its superior facilities. For this purpose $25,000 a year, it is estimated, is necessary, $10,000 for which, it is said, already has been subscribed by well-known citizens in various parts of the United States. Dr. Harlan is right in thinking that exporting firms, to which the improvement of the consular service is a matter of such direct importance, on the score of self-interest, should willingly assist in maintaining the school.

There seems to be a dearth of good material when it comes to selecting men for the consular service, since they require special training different from that of an ordinary college course. Dr. Harlan in appealing to exporters for help insists that he offers them a valuable permanent investment in the form of increased efficiency of American consular work. That there is room for much improvement in this direction is apparent to all who have given the subject the slightest thought and investigation.

Team Work to Get Trade.

MARKET reciprocity, or the cultivation of the "get together and pull together" spirit among the merchants of Chicago, is the pithy advice given by R. C. Hall, president of the Chicago Association of Commerce, in a recent issue of "Chicago Commerce," the association's weekly bulletin. "Reciprocity of interest," Mr. Hall says, "has brought men engaged in the same lines of trade into closer relation, and this has resulted not only in public good but in personal advantage. There has developed a recognition of equal rights among business men, and the more general this sentiment of reciprocity becomes in a great market like Chicago, the more its trade is bound to increase."

Commenting further on the necessity for co-operation and team work, Mr. Hall says:

"Every jobber and manufacturer in our city should have the same interest in attracting and retaining merchants in the market. Without the packing house, the music and piano dealer would have to content himself with a smaller trade; without the lumber yards, the dealer in clothing or furnishing goods would be obliged to limit his business.

"It is the volume of trade that makes and maintains a great market rather than the extent of its dealings in a few commodities, however important they may be.

"Community of interest among the jobbers of a market is absolutely necessary to its growth and development. Chicago truly is the great central market; its business men have established a reputation for fair dealing and integrity, and with reciprocity and harmony among its many and diversified interests it is invincible.

"This is the most important economic question that the business men of Chicago can consider. The education of our merchants and manufacturers in the theory and practice of reciprocity and co-operation to their highest degree of practicability is today the most important single aim of the association.

"I believe that no member will either fail to recognize these facts or will decline to give them his cordial indorsement. It is essential, however, that they should not be forgotten, but kept in practical every-day use."

That co-operation advances trade interests, is an axiom the truth of which is so apparent that there is absolutely no room for argument. The depression or prosperity that may attend one or more lines of industry in a community is bound to assert itself to a greater or less extent in other branches of trade, hence the necessity for concerted action on the part of business men that President Hall so emphatically urges. Every business man should practice altruism toward his business associates whether or not they may be engaged in business pursuits allied to his. President Hall's advice to Chicago merchants, if acted upon by them to the fullest extent, will be attended with results that will eventually make Chicago the greatest business center not only of the United States but of the entire world.

RANDOM NOTES AND SKETCHES.

BY SIDNEY ARNOLD.

An illicit still, one the collector of internal revenue at Washington, D. C., is said to know very little about, is being built within a stone's throw of the Bureau of Engraving and Printing at the national capital, where all the stamps supposed to be put upon alcoholic liquor packages are engraved and printed. The distillery is being built around a high telephone pole, though for what reason I cannot say, unless Dr. Harvey W. Wiley, Chief of the Bureau of Chemistry of the Department of Agriculture, who is superintending the construction of the distillery, intends to have a lookout stationed on top of the pole in case the internal revenue officials might by mistake surmise that the still is used for moonshining purposes and attempt to raid it. This is not likely, however, for the distillery, which when completed will be one of the most perfectly appointed institutions of the kind in the country, will be used by Dr. Wiley primarily to demonstrate the uses of denatured alcohol as a fuel for running farm engines of the internal explosion kind, and to show the farmer and others how, by using garbage, denatured alcohol can be made in any quantity desired. When the fires are started in the distillery and the properly prepared mash begins to bubble, Dr. Wiley will begin making high-class stuff. First, he is going to use watermelon rinds, corncobs, and other things the like of which are thrown into the garbage on the farms of the country. He is going to convert the sugar in these waste products into alcohol, which in turn will be denatured so as to make it unfit for use as a beverage but of great economic value. Congress passed the denatured alcohol bill two years ago, but as yet the farmers do not seem to be taking much interest in their privilege and Dr. Wiley intends to show them a few things. What part the telephone pole will play in Dr. Wiley's project I leave for minds brighter than mine to decide. Dr. Wiley is a genius, however, and he probably has some use for it that none of us know anything about.

* * *

Mending a broken arm with a nail, an extraordinary feat in surgery, has recently been performed successfully, it is said, by New York hospital surgeons. It was a plan resorted to after usual methods had failed, and when the case seemed to be hopeless. Now the limb operated upon is said to be as sound as it ever was. Charles Nelson, while alighting from a car, suffered such a severe fracture of his right wrist that one bone lapped over another. He was taken to a hospital and the arm placed in a splint, but the bones did not knit. Thereupon the surgeons resolved upon a novel method of treatment. Nelson was put under the influence of an anesthetic and an incision was made in the injured arm above the wrist joint. What is called the shaft of the bone was pried open and the two overlapping bones were set together. Meanwhile a steel nail about one and one-half inches long had been carefully sterilized and medicated. A vise of cotton and other material was made for the arm, and, with an ordinary hammer, the nail was driven its entire length, piercing both bones in much the same fashion as two boards would be fastened together. The splints were then replaced. It would appear to me that the surgeon who performed this stunt had at one time or another become proficient in carpentry, otherwise, he would never have been able to do such a good job as this. The "Farmer's System" of performing surgical operations may be all right, but it would never make a hit with me.

* * *

With a deafening crash two steers blew up in a pasture near Bremen, Ind., August 24, and so complete was their annihilation that the only trace found of them was a tail wrapped around the limb of a tree on an adjoining farm. Oscar Nuff, the owner of the animals, had been destroying stumps in a field, and carelessly left a pile of dynamite sticks lying near a dilapidated fence. The steers put their heads through an aperture in the fence, and ate every stick of the explosive. A few minutes later Nuff returned from the field in quest of additional dynamite, and discovered one of the big red animals calmly licking the turf at the very spot where the sticks had reposed. Several dollars' worth of the explosive had disappeared down the throats of the voracious animals. Nuff, momentarily forgetting that his steers had become animated torpedoes, and thinking only of the loss of his dynamite, let go his temper. Seizing a large stone he hurled it at the nearest of the two living bombs. In an instant the air was rent by a terrific crash, a red flame shout out, and a second explosion followed immediately. When the smoke had cleared the space was vacant, the fence was in splinters, and the grass was scorched. The dynamite in the first steer had been exploded by the shock of the stone, and the concussion of the explosion set off the charge in the stomach of the other animal. Farmer Nuff, it is reported, came through the explosion without injury, though I'll wager all I possess that he made the record high jump of his life when the stone that he threw hit that steer. The Society for the Prevention of Cruelty to Animals, I imagine, will never have a chance in future to prosecute Mr. Nuff for maltreatment of dumb brutes, and this unique experience will no doubt teach him to exercise a little caution when handling dynamite from this time forth. This will be about *'nuff* for him.

* * *

The following lines should serve to impress upon us the absolute necessity of never giving in even under the most adverse circumstances:

"When you acknowledge you're down and out you're licked,
But so long as you swear that you won't give in—
That you'll hang-on and bang-on until you win,
No matter how hard you were cuffed and kicked,
No matter how sadly your faith was tricked—
If you just remember what brought you low
And keep away from the undertow,
It's only a matter of holding tight
Before you're back in the big world fight!
But the man who pines and the man who whines,
Who skulks away from the skirmish lines,
Who hasn't the grit to swing and hit,
And slug his way, never counts a bit.
He isn't worth bothering over a minute—
He's out of the game and he never was in it.
A man who is really a man, keeps his luck
So long as he keeps a good chest full of pluck."

News Siftings

It is reported that the Great Western Stove Co. of Leavenworth, Kas., is soon to begin the erection of a $40,000 foundry.

The Omega Gas Stove Co. of Ardmore, Okla., has been incorporated with a capital stock of $20,000 by Paul B. Taylor, D. H. Herring and L. S. Dolman.

Judge Carlos H. Stone, vice-president of the Great Southern Mica Co. of Cleveland, O., died on September 21 and was buried on September 23. He was a very prominent attorney and an ex-judge in Cleveland.

The Enterprise Foundry Co. of Sackville, N. B., Canada, whose stove plant was recently destroyed by fire, announce that they will be prepared before the end of the year to supply the trade with their line of "Monarch" stoves and ranges. They say that their line for 1909 will embrace a number of new patterns which cannot fail to interest dealers.

The discharge of J. W. Campbell, said to be a representative of the Wrought Iron Range Co. of St. Louis, range peddlers, is said to have resulted in a shooting affray at Frostburg, Md., on September 14, in which four men were wounded. B. S. Brooks, superintendent of the range peddling crew, Chas. Martin, a member of the crew and two by-standers are said to have been the victims of the discharged range peddler's bullets. The men had been working the territory in and around Frostburg.

F. M. Borden & Bro., 118-122 N. Second street, Philadelphia, Pa., are sending out an attractive post card on which is printed the following: "The season for fall and winter goods is now at hand, you want to further increase your business. The wave of prosperity has again returned. You want goods of known quality—goods that will bring you a profit at the right price. We have them: Novelty stoves, furnaces and ranges, 'The Only Best'; oil heaters, four leaders, Ideal, Reliable, New Process, Model, airtights, radiators, egg stoves, globe stoves, oak stoves. Sundries as follows: Stove pipe, elbows, dampers, trucks, casters, polish, cement, coal hods, shovels, registers, hollowware, etc. Write to-day for our complete catalogues, descriptive of these goods, and prices and discounts on same. It will put money in your pocket and win your customers' goodwill."

George M. Clark & Company, Chicago, division of the American Stove Co., are sending out a circular treating of "Jewel" coke burners. The "Jewel" has four legs of adjustable length, and can be used alongside any gas range of any height or by itself. It has a side draft and a poker door. The linings are of heavy cast iron and are reputed to be the best made. The "Jewel" coke burner is a full base heater. When the direct draft damper is closed heat passes down one side of the back and around under the ash pan, then up the flue. It has a good duplex grate, large ash pan, two 7-inch holes and center on top. A water front can easily be fitted in it when desired. George M. Clark & Company say that the "Jewel" will burn coal or wood equally well and that it can also be used to burn garbage. When writing George M. Clark & Company kindly mention THE AMERICAN ARTISAN.

BARGAINS OFFERED BY J. P. LINDEMANN & SONS.

J. P. Lindemann & Sons, 5000 State street, Milwaukee, Wis., manufacturers of tinware and sheet iron goods, call the attention of the trade to their advertisement appearing in this issue of THE AMERICAN ARTISAN in which they offer a very large stock of "Red Cross" ranges, stoves and heaters at greatly reduced prices. The first column in the advertisement designates the sizes of the stoves offered, the second the names, the third the original selling prices, and the fourth the prices that J. P. Lindemann & Sons have placed upon the goods. As will be seen from the advertisement the assortment is a very comprehensive one. J. P. Lindemann & Sons are sending out a circular showing the styles of the stoves and ranges that they are now offering at attractive figures, and which will be forwarded upon request. When writing kindly mention THE AMERICAN ARTISAN.

THE "CONIA" LAMP.

G. Cohn & Co., 337 Broadway, New York City, say that there is a steadily increasing demand for the "Conia" lamp, which they claim to be "the greatest light of the age." The "Conia" is a new kerosene incandescent central draft lamp, which is said to be positively smokeless, by reason of its great brilliancy, "Conia" burners giving a light of from 100 to 350 candlepower. The flame can be regulated to any desired height, and the mantels in ordinary use will last, it is said, a whole year. The chimneys which are made in Jena, Germany, are guaranteed by G. Cohn & Co. not to break from heat. The "Conia," which consumes one quart of kerosene in 12 hours, is said to be especially adapted for private residences, halls, porches, country stores, churches and other buildings. G. Cohn & Co., say that they have some good territory open for agents who may be looking for a lamp of exceptional merit. They request that dealers in every community write them for their catalogue and price list. When seeking further information concerning the "Conia" lamp kindly mention THE AMERICAN ARTISAN.

THE STEWART OAK STOVE.

Fuller & Warren Co., Troy, N. Y., manufacturers of Stewart stoves, ranges, furnaces and water heaters, are sending out an attractive booklet containing a detailed description of their latest production, the Stewart Oak stove, a single or double heating stove, which can be furnished with direct draft or return flue. The heating capacity and fuel economy of this stove are said to be its greatest features, the flues being designed so as to get a large area of effective radiating surface, insuring economy in operation. The return flue on the Stewart Oak is made entirely of cast iron. It is of very large capacity, adapted for either coal or wood, and is fitted with a powerful check damper in connection with the ash-pit section. The Stewart Oak is

equipped with a gracefully designed nickeled urn, which renders its appearance especially attractive. All the nickel work on this stove is well ventilated, so as to prevent tarnishing by the heat. The aim of Fuller & Warren Co. in putting this stove on the market is to satisfy the demand for a handsome, economical stove of large heating capacity that combines the best features of the base burner and oak stove and still be sold at a moderate price. The Stewart Oak is made in four sizes, the diameters of the fire-pot measuring 13, 15, 17 and 19 inches, respectively. When writing Fuller & Warren Co. kindly mention THE AMERICAN ARTISAN.

THE "KING QUALITY" STEEL RANGE.

The Quality Stove & Range Co., Belleville, Ill., is calling the attention of the trade to their "King Quality" steel range which has been given an entirely new dress, and which is made with either cabinet or cast leg base. This range burns soft coal, hard coal, coke or wood, and is said by the makers to represent the highest standard of excellence, utility, economy and convenience. It is a very attractive range. All the nickel on it is of the highest double process quality, and of a smooth surface which gives it a highly lustrous appearance, and it is easily kept clean. The body of this range is made of a beautiful even colored blue steel, the oven top is arched to give added strength and prevent bulging and sagging, and the oven bottom is made of heavy steel plate to which two bars are riveted. The "King Quality" range is provided with a ventilated oven, openings being placed in the rear through which the fumes and air pass to the flue. The manufacturers assert that this range will perform efficient service under all conditions. When writing for catalogue kindly mention THE AMERICAN ARTISAN.

CATALOGUE 37 OF SCHNEIDER & TRENKAMP CO.

Schneider & Trenkamp Co., division of the American Stove Co., Cleveland, O., has issued its catalogue No. 37, in which are listed and described Reliable gas stoves and ranges. The catalogue measures 6x9 inches, contains 80 pages, and is printed in two colors throughout, on a very fine grade of enameled paper. The illustrations are very clear as to detail, and could hardly appear to better advantage. On pages 4, 5, 6, 7 and 8 of the catalogue are shown, with dimensions and prices, several illustrations of the Schneider & Trenkamp line of hotel gas ranges with the different attachments, such as the company makes for manufactured and natural gas. These ranges are constructed with heavy planished steel bodies, cast trimmed balanced drop doors, and with heavy cast tops fitted with removable grate bars or anchor plates with solid lids. Considerable space is devoted to the description of the company's Cabinet gas ranges, which, they assert, are the highest achievement in gas range construction. These ranges are constructed with a full cast trimmed polished steel body, cast-iron oven bottom, spring-balanced drop oven doors, polished steel roller back warming closet door, and nickel trimmings. In addition to the regular removable loose cone burners, each range is equipped with one giant burner, simmering burner, double oven burner with double valves and removable wire oven racks. On page 17 is shown a combination elevated oven and broiler range with lower oven, equipped with a burner at the top for broiling and one at the bottom for baking. There are also described in this catalogue six-burner and four-burner all cast-iron gas ranges, etc., with the different attachments for manufactured and natural gas. Reliable gas circulating water heaters are also described at length in the catalogue, together with gas hot plates, gas laundry stoves, nursery burners and stoves, gas range canopies, high warming closets, ovens, and removable single and giant burners, fitted with loose cones, with which all Reliable gas ranges are equipped. The principle applied in the construction of the burners is that the gas orifices are raised three-sixteenths of an inch above the surface of the body of the burners, thereby insuring a thorough circulation of air around each flame stool, which produces a sharper flame of more perfect combustion than may be obtained by the usual type of burner in use on various other makes. When writing for catalogue No. 37 kindly mention THE AMERICAN ARTISAN.

THE S. M. HOWES COMPANY.

The S. M. Howes Company, 40-46 Union St., Boston, report that they are having a very successful season's business, that the demand for their stove and furnace pipe and fittings is steadily increasing, and that their "Yankee" all-steel dampers and clips are becoming more and more popular among stove and furnace men. The following is a letter which they are sending to the trade:

"When we say that no concern in the country is better equipped to furnish first-class goods in stove and furnace pipe and fittings at right prices, we are confining ourselves to facts.

"We take this opportunity to invite the trade to inspect our goods, which we display at our Union Street store, and solicit sample orders from those who cannot do so conveniently."

"Electrical Contracting," by Louis J. Auerbacher, is one of the latest publications of the McGraw Publishing Co., 239 W. 39th St., New York City. The book has been written for the wireman and contractor, with a view to giving him not only some practical hints on the latest construction methods, but also to suggest to him means for increasing his income. A system of accounting is described in the book which to those about to embark in the electrical contracting business, as well as the established contractor, may suggest means for detecting financial leaks, as well as for systematizing accounts. The book, which is replete with illustrations, contains chapters on the following subjects: "Shop System for Electrical Contractors"; "Estimating on Contract Work"; "Wiring Systems"; "Residence Wiring"; "Special Lighting Devices," etc. The book measures 5½x8½ inches, contains 150 pages and index, and is well bound in cloth. The price of the book is $2 net.

The Hardware Record.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 40 to 45 inclusive.

The Detroit Handle Co., which has a capital stock of $5,000 has succeeded the Eby Mfg. Co.

A plant for the manufacture of razor hones and whetstones will be erected at Jasper, Ga., by R. L. Hunter and others.

Operations have been resumed at the plant of the Newcastle Stamping Co. of Newcastle, Pa., which is now in the hands of Receiver George W. Johnston.

The International Wire Co. of New York City has been incorporated with a capital stock of $250,000 The directors are: A. Harrison, Jos. A. Walsh, and Edward H. Cook.

The United Hardware Mfg. Co. of Los Angeles, Cal., expects to have its plant in operation by February, 1909. The plant will be located near the foundry of the Pacific Malleable Castings Co.

A firm of hardware dealers in the British Isles informs the American consul at the point in question that it would like to become direct importers of nuts and bolts of American make. By writing the Bureau of Manufactures, Washington, D. C., and referring to file No. 2612 the address may be obtained.

The first regular monthly meeting since June of the Hardware Merchants' and Manufacturers' Association of Philadelphia was held on September 15. Reports of the various committees were received, and general business was reported as showing a healthy improvement. September business was reported generally satisfactory.

The Wheeling Corrugating Co., Wheeling, W. Va., are calling the attention of the trade to their nested stovepipe and to their one-piece and four-piece elbows, for which they say there is at present a big demand. They announce that they are prepared at all times to supply the trade with tin plate and sheet metal work of all descriptions. When writing for descriptive literature kindly mention THE AMERICAN ARTISAN.

The Standard Horse Nail Co., of New Brighton, Pa., report a very successful season's business in horse nails. They are now very busy making preparations to meet the demands of the fall trade, which they anticipate will be normally heavy. The company has recently issued a catalogue in which are listed their full line of horse nails, and which they request the trade to send for. When writing the Standard Horse Nail Co., kindly mention THE AMERICAN ARTISAN.

Powers & Williams, Streator, Ill., have put on the market the Powers automatic chimney top, with iron mountings only or complete with cover and vane. This chimney top is said to have made a very favorable impression among the trade by reason of its inherent good qualities. Powers & Williams say that it triples the efficiency of smoke stacks. When writing Powers & Williams for further information concerning this chimney top, and for prices on skylight glass and metallic skylights, kindly mention THE AMERICAN ARTISAN.

S. R. Droescher, importer and manufacturer, 79 Warren street, New York City, makes the announcement that he is now carrying the largest assortment of hones in the world. The "Apart" hones are well known to the trade as especially adapted for razors, surgical instruments and fine steel tools. S. R. Droescher also carries a complete line of cutlery, razor strops and hardware specialties. When writing for catalogue kindly mention THE AMERICAN ARTISAN.

The Wyeth Hardware & Mfg. Co. of St. Joseph, Mo. plans within the next few months to erect a building in St. Joseph which will occupy half a block and will cost in the neighborhood of $200,000. It is planned to use the building exclusively for the wholesale hardware business and for the main offices of the company. The building will have a frontage of 240 feet and a depth of 130 feet. It will be six stories high and will have a floor space of over 300,000 square feet.

The former prices of 90 and 20 cents for both single and double strength window glass were reaffirmed at a meeting of the Central Window Glass Jobbers' Association, held in Pittsburg on September 17. In the course of the meeting the fact was brought out that the stock of glass in the hands of dealers throughout the country is greatly depleted, and that the general trade prospects are much brighter now than they have been for same time past. It is said that many plants will soon be started in operation to supply the demand.

The F. D. Kees Mfg. Co., Beatrice, Neb., is sending out a circular illustrating and describing the Kees corn husker, with which Irvin L. Kemp, the champion corn husker for 1907, made his record, namely, 230 bushels and 60 pounds of corn husked in ten hours. The company states that Kees corn huskers are designed for quick easy work, that they are shaped to fit the hands perfectly and that they are the most comfortable huskers made. In the circular appears a fac-simile letter of Mr. Kemp's in which he says that the Kees No. 2 husker gave him the greatest amount of satisfaction of any that he had tried. When writing the F. D. Kees Mfg. Co. kindly mention THE AMERICAN ARTISAN.

The joint convention of the American Hardware Manufacturers' Association and the National Hardware Association will be held at Memphis, Tenn., on November 18, 19 and 20. At a meeting of the hardware dealers held at Memphis on September 12 plans for entertaining the delegates and their friends were discussed. Irby Bennett, president of the jobbers' association, was present at the meeting. The sessions of the convention will be held at the Hotel Gayoso, which hotel will be headquarters for the jobbers, and the Peabody Hotel for the manufacturers. No definite plans were decided upon at the Memphis meeting of September 12, the general outline of the convention alone having been discussed.

The William Connors Paint Mfg. Co., Troy, N. Y., manufacturers of "American Seal" paints and cements, had a very attractive float in a business men's

parade held at Troy on the afternoon of September 8, during "Old Home" week, which was celebrated four days, September 6 to 9 inclusive. The float attracted much attention and is said to have elicited much favorable comment from those who witnessed the parade. The William Connors Paint Mfg. Co. reports that "American Seal" paints and cements are coming more and more into popularity, and that their "American Seal" cement is being used more than ever by stove, range and furnace men. When writing The William Connors Paint Mfg. Co. kindly mention THE AMERICAN ARTISAN.

Suit for an injunction to restrain the City of Chicago from enforcing its firearm ordinance has been instituted by a number of Chicago hardware dealers who seek to have the two ordinances passed last March regulating the sale and carrying of revolvers, bowie knives and other weapons, declared void. The bill also seeks to enjoin the city from prosecuting alleged violations of these ordinances. One ordinance requires all dealers in revolvers and other weapons to obtain a license and not to sell a weapon to a resident who can not show a license. The second prohibits the owning of weapons except by licensed persons. In the suit it is declared that the ordinances discriminate, that they are repugnant and inconsistent with the general laws of the state and contravene public policy.

E. W. Evenson, secretary of the Inland Empire Hardware & Implement Association, Spokane, Wash., has issued a circular to the members of that association setting forth the results of his queries sent out to congressional and senatorial candidates on the subject of the parcels post. Secretary Evenson in stating that he had received replies from five of the seven congressional candidates written to and from one senatorial candidate, denounces the enaction of the parcels post law which would provide that the government should carry 11 pounds of merchandise through the mails from any point in the United States or its insular possessions for 25 cents. Mr. Evenson says that parcels post would kill the retail merchandising interests of the Inland Empire in that it would work in favor of the catalogue house against the retailer.

A WINDOW DISPLAY OF SEEDS.

A window display that received honorable mention from the judges in THE AMERICAN ARTISAN'S hardware window display competition, was made by Mr. L. S. Ulman with Dorman & Smyth Hardware Co., Salisbury, Md. The display as will be seen from the photograph, was made of seeds for the purpose of advertising seed plows, paints, windmills and all kinds of farm implements. The window was photographed from the inside of the store as it was found impossible to get a view of the entire display from the outside. The display was intended to represent a model farm with the different crops growing, and the plow and cultivator working in the field. Placed in the fields were signs to advertise the different lines handled by Dorman & Smyth Hardware Co. The house in the background was built and painted by Mr. Ulman, and everything in the window was made on the premises. Around the house a hedge is to be seen, with a cedar standing by. Running by the house a road is shown with a telephone line connecting with the house. Mr. Ulman says that the display attracted a great deal of attention and was the means of bringing a lot of trade to the store.

Honorably Mentioned by the Judges in THE AMERICAN ARTISAN'S Hardware Window Display Competition.—Submitted by L. S. Ulman, with Dorman & Smyth Hardware Co., Salisbury, Md.

THE SHRP-SHAVR SAFETY RAZOR.

The Shrp-Shavr Safety Razor Co., 108-110 Duane St., New York City, report that the sales of Shrp-Shavr safety razors and blades are growing very rapidly. This razor retails for 25 cents and the company states that its shaving qualities are equal to those of razors that sell at a much higher price. They call special attention to the blades of this razor, which

they say are of a very superior quality. The Shrp-Shavr, the makers say, opens up a safety razor field that so far has not been touched, hundreds of new safety razor buyers being induced to try the Shrp-Shavr because of the low prices at which it is sold, the merits of this razor and blades being such as to make those who once try them permanent safety razor users. The manufacturers call the Shrp-Shavr, the "25-cent safety razor with a $5 shave," backing this claim with a money-back guarantee. When writing the Shrp-Shavr Safety Razor Co., kindly mention THE AMERICAN ARTISAN.

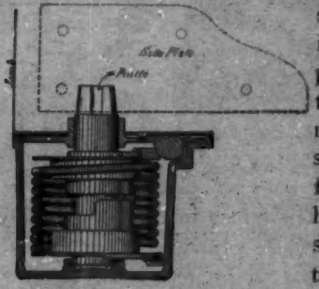
NEW TYPES OF GAS PLIERS.

The Simmons Hardware Co. of St. Louis calls the attention of the trade to the "Chipaway" gas pliers which they are putting on the market, illustrations of which are shown herewith. These pliers are made of high-grade, oil-tempered, special crucible steel. The jaws are polished and the teeth are milled, insuring accuracy in every respect. An extra heavy rivet at the joint of the pliers where the greatest strain comes, makes the "Chipaway" gas pliers very substantial and durable, it is said. These tools are attractive in appearance, the natural finish of the handle contrasting well with the polished jaws. When writing the Simmons Hardware Co., kindly mention THE AMERICAN ARTISAN.

"Chipaway" Gas Pliers.

"MATCHLESS" FLOOR SPRING HINGE.

The Lawson Mfg. Co., 40 Dearborn street, Chicago, report that their "Matchless" double-acting floor spring hinge is acquiring a marked degree of popularity with the trade, and that the demand for these hinges is steadily increasing. The fact that these hinges have been on the market since 1895, and that in that time, according to the company, not one set has required repairs from the fault of the hinge, speaks volumes for the serviceability and wearing qualities of this well-known hardware specialty. "Matchless" hinges are said to require no adjusting, and never to need attention after being properly put up. They are quick and easy to apply, operate smoothly and noiselessly, and are adapted for all kinds of double-acting doors. The "Matchless" floor spring hinge can be furnished without the side plates by using an invisible shoe or socket, and when desired this hinge can be furnished with pintle raised for ½ or ⅝-inch threshold. The Lawson Mfg. Co. will be pleased to mail their catalogue to those interested in the "Matchless" line of hardware specialties manufactured by them.



Sectional Cut of Hinge.

When writing kindly mention THE AMERICAN ARTISAN.

THE "SPEEDY" ROTARY WASHER.

The H. F. Brammer Mfg. Co., Davenport, Ia., has put on the market a washing machine known as the "Speedy," which is said to be a wonderful success as a machine for the quick and thorough washing of clothes. The gearing, while of an ingenious construction, is composed of but very few parts, all properly proportioned with respect to weight and strength and covered to prevent accidents. The lever arm is so placed as to permit operating the machine while the operator is seated, a feature which will no doubt be appreciated by women on wash days, when their strength is frequently taxed to the utmost. The momentum of the fly-wheel, which rotates at a high speed when the machine is in operation, has the effect of evening the load and keeping the machine in operation with comparatively little effort on the part of the operator. The tub of the "Speedy" washer is made of Louisiana red cypress lumber, thoroughly dried, all the joints being tongued and grooved. The sides and bottom are corrugated similarly to a wash-board, affording the largest possible rubbing surface. The legs are a part of the tub proper, being extended staves and which are strengthened by means of a heavy cross near the extreme end. The lid is of double thickness and fits tightly on the tub, preventing the escape of steam and the cooling of the water. The finish of the machine is the natural color of the wood. The hoops and gearing are gold bronzed. The fly-wheel is painted green and a handsome label bearing the name of the machine lends a finishing touch to the whole. The H. F. Brammer Mfg. Co. guarantees this machine for one year against defective material and poor workmanship. Descriptive literature upon application. When writing for it kindly mention THE AMERICAN ARTISAN.

CATALOGUE OF THE ENTERPRISE MFG. CO. OF PENNSYLVANIA.

The Enterprise Mfg. Co. of Pennsylvania, Philadelphia, Pa., have just issued their 1908 catalogue which is a book containing 128 pages and measuring 6 by 9 inches. The book is replete with well-printed illustrations of "Enterprise" products, among which may be mentioned "Enterprise" sad irons, double pointed star irons, polishing irons, handles for cold-handle irons, food choppers of various descriptions, power choppers, grinding machines, detachable meat hooks, coffee mills, improved patent suction and force measuring faucets, self-priming and measuring pumps, smoked beef shavers, cheese cutters, bung-hole borers, tobacco and herb cutters, tincture presses, cork pressers, lawn sprinklers, fruit and wine presses, cherry stoners, raisin and grape seeders, vegetable slicers, cobblers' kits, etc.

"Enterprise" sad irons are ground by patented machinery which is said to make every iron true and the face of it slightly convex, thus making ironing easier than with the old style flatirons. The detachable handles are wood, excepting the lower part or stretcher, which is made of iron. "Enterprise" polishing

irons have all round edges and are adapted to laundry and general polishing purposes. They are provided with detachable handles, which are said never to become hot. The "Enterprise" meat and food masticator, is designed for the use of invalids, dyspeptics, and those with poor teeth. It can be attached to the dining-table at meal time and meat and food of any kind run through onto the plate thoroughly chopped into fine particles. The Enterprise Mfg. Co.'s line of meat and food choppers is a very extensive one and all are fully guaranteed. The grinders of all "Enterprise" grinding and pulverizing mills are guaranteed to be strong and to do their work evenly. The smaller sizes can be regulated to grind coarse or fine by means of a regulating or thumb screw. The "Enterprise" improved patent suction and force measuring faucet is guaranteed to measure correctly and to draw a gallon of molasses in winter in one minute without the use of a funnel. The "Enterprise" smoke beef shaver is said to be a great time saver and economizer. The knife is suspended pendulum-like, each stroke cutting a slice cleanly and quickly, requiring but a few moments to shave down a pound of beef. The automatic feed can be regulated to cut from shavings as thin as tissue to slices one-eighth of an inch thick by adjusting a small bolt holding the connecting rod. The Enterprise Mfg. Co. of Pennsylvania will be pleased to forward their new catalogue to the trade upon request. When writing kindly mention THE AMERICAN ARTISAN.

TREASURY DECISION ON DENATURED ALCOHOL.

Referring to shipments of specially denatured alcohol under the wholesale dealer's bond, J. C. Wheeler, acting commissioner of Internal Revenue, Washington, D. C., wrote the following letter on September 8 to an Internal Revenue collector. It is known as Treasury Decision 1412.

"Referring to office letter addressed to you on the 31st ultimo and your reply thereto under date of the 3d instant in reference to shipments of specially denatured alcohol under wholesale dealer's bond, it now appears that no excessive withdrawals under that bond were made, and that the apparent excess arose from the fact that this office was not advised as to the quality of alcohol previously withdrawn and accounted for.

"In order that this office and collectors in whose districts denaturing warehouses are located may be more fully advised as to the availability of either manufacturers' or wholesale dealers' bonds for further withdrawals of specially denatured alcohol, collectors with whom such bonds are filed will hereafter each month ascertain from the reports furnished them the quantity of alcohol which the manufacturer or dealer in each case is entitled to receive under his bond. The quantity so ascertained will be at once certified to this office and also to the various collectors in whose districts the manufacturers' or dealers' notice, Form 583, has been previously filed.

"Certificates of this character will supply the place of supplemental Forms 583, prescribed in T. D. 1246, the use of which was discontinued under article 19, Regulations 30, Supplement No. 1."

RETAIL HARDWARE DOINGS.

NEW FIRMS AND CORPORATIONS.

Fenton, Mich.—The Slocum Hardware Co. has been incorporated with a capital stock of $10,000.

La Jara, Colo.—Murphy-Newcomb Hardware Co. has been incorporated with a capital stock of $10,000.

Smothersville, Ill.—G. B. Heard has engaged in the hardware business.

BUSINESS CHANGES.

Whitewell, Tenn.—W. E. Brown & Son have purchased the hardware business of J. C. Aley.

Dunlap, Ia.—A. L. Rule sold his hardware store to Croft, Davis and M. C. Daily.

Shenandoah, Ia.—W. R. Ryerson has sold his hardware stock to Cooper & West.

Freeport, Ill.—Genant & Luedeking have purchased the hardware stock of Graalmann & Wieman.

Appleton, Wis.—Fred Menbach and Adolph Nommenson have formed a partnership, and will carry on the hardware business formerly conducted by Haas & Menbach.

Galesburg, Ill.—Geo. A. McFarland has sold his hardware store and tin shop to Alfred P. Hectorne.

Loup City, Neb.—P. O. Reed has disposed of his hardware business to John Czaplewski.

Galva, Ill.—Kewley & Kelly have succeeded Arthur Aby in the hardware business.

Baraboo, Wis.—Chas. Ott has sold his interest in the Ott Brothers Hardware Company to his brother, Will Ott, and the firm will be known hereafter as the Will Ott Hardware Company.

Syracuse, Ind.—L. N. Kitson has sold his hardware business to Miller Bros.

DeLand, Ill.—B. W. Collins has purchased an interest in the hardware firm of Kessler & Hays. The firm will hereafter be known as Hays & Collins.

Concordia, Kas.—Robinson & McCrary have sold out to the Western Hardware Company.

Coon Rapids, Ia.—E. A. Bump has purchased an interest in the hardware firm of Patrick and in the future the firm will be known as Patrick & Bump.

Clarksville, Mo.—J. A. McDannold has purchased a half interest in Middleton's hardware store.

MISCELLANEOUS.

Napa, Idaho.—The Stoddard Bros. Hardware Co. is reported in bankruptcy.

Leavenworth, Kas.—The Crancer Hardware Co. is erecting a new six-story building.

Glendale, Ore.—The hardware store of F. C. McGregor & Co. was burglarized.

Chehalis, Wash.—The hardware store of Fred Dunbar & Co. was burglarized.

Sheboygan, Wis.—The hardware store of the Prange Guessenhainer Co. was burglarized.

Watertown, N. Y.—The store of the W. W. Conde Hardware Co. was damaged by fire.

Swayzee, Ind.—Alva Harold has sold his hardware store to Chas. M. Harrington.

Newton, Ia.—H. S. Rayburn has sold his hardware stock to W. J. Nicholson.

Hardy, Neb.—W. D. Calder has disposed of his interest in the hardware business to his partner, Mr. Scott.

Des Moines, Ia.—The Luthe Hardware Company is making extensive improvements on its building.

Gaston, Ind.—The hardware store of Powers & Co. was partially destroyed by fire.

Attalia, Ala.—A petition has been filed, it is reported, in involuntary bankruptcy against the Attalia Hardware Company.

Prosser, Wash.—The store of the Harper Hardware Company was burglarized.

South Lyon, Mich.—Fred and John Herrick have purchased the hardware stock of Dave Killins.

Johnson, Neb.—Ed. G. Smith, who recently purchased the hardware stock of D. Casey & Son, has sold the entire stock to W. G. Waidley and G. H. Mendall.

Colwood, Mich.—William Huffman has purchased an interest in the hardware store of C. D. Andrews.

McBain, Mich.—Edward DeYoung and O. D. Rice have purchased the hardware business of the Straw, Kavanagh Co.

Advertising Department

Our readers are invited to send in copies of their advertisements in the local press for criticism. All communications should be addressed to the "Advertising Department" of THE AMERICAN ARTISAN.

The plan adopted by Davis, "The Hardware Man" of Boston, Mass., of holding special weekly sales at various times during the year, as indicated by the accompanying advertisement reproduced in reduced form, is an excellent one, and can be relied upon to be productive of good results. The fact that 250 such sales have been held by Mr. Davis is *per se* sufficient evidence that he has found the plan to be a business getting one. Some of the "specials" that

250TH SPECIAL
WEEKLY SALE
Beginning today and continuing the entire week we celebrate our 250th Special Weekly Sale, an event unparalleled in business circles. Five years ago we started this form of reminding people of necessities at various times during the season and of making special prices on the articles. In the 250 weeks of advertising we have secured thousands of satisfied customers, and it is our intention to increase this number several times as large during the next twelve months. For a leader during this Anniversary Week we will sell the following "Specials"
Tubular Lantern
Standard Make
37c
Hand Drills
79c
Gem Folding Mitre Box
1.17
Hand Forged Pocket Knives
Regular Price 50c and 75c
39c
The Davis "6 TE 8" Razor
Is equal in quality to razors selling for $2.00..
1.00
Satisfaction Guaranteed or Money Refunded
Enders Safety Razor
12 blades, requires no honing or stropping, simplest and equal to highest priced razors
88c
These Are All FINEST QUALITY GOODS "NO SECONDS"
Headquarters for "Keen Kutter" Tools and Cutlery
IF IT'S Hardware SEE
Davis
THE HARDWARE MAN
COR. PORTLAND AND SUDBURY STS.
IF IT'S Price & Quality SEE

Mr. Davis advertises, namely, lanterns, hand drills, miter boxes, pocket knives and razors, are goods that can be featured at any time, for the reason that they are in demand at all seasons of the year. Mr. Davis' advertisement is an exceptionally good one. Suitable type has been selected throughout, the matter has been well laid out, the cuts have been symmetrically arranged and the ad. in general is an attractive one. It is not often that an advertisement possessing so many admirable features as this does is brought to our attention. It is evident from the large type used that the lanterns and hand drills advertised are the greatest bargains offered by Mr. Davis. The ad. is well printed, a feature which of course enhances its appearance greatly. It appeared in the *Boston* (Mass.) *Post* of September 2 and occupied 7½ inches of space, two columns wide.

* * *

The advertisement of Chas. A. Cole Co. of Camden, N. J., is a very good one of its kind. It is what may be termed a general publicity advertisement, and it is probable that such an ad. is particularly suited to Chas. A. Cole Co.'s business. When kept before the public all the time it is certain to be attended with

Heaters and Ranges
NEW OR REPAIRED
Tin, Slag and Slate Roofing
Sheet Iron Work of every Description
Chas. A. Cole Co.
Delaware Avenue, Wood and York Streets

good results. It appeared in the *Camden* (N. J.) *Daily Courier* of September 2, and took up three inches of space two columns wide.

* * *

The advertisement of the Central Hardware Co. of Portsmouth, O., in which the Enterprise food chopper is advertised, is a fairly good one in some respects. The merits of this chopper are set forth in a convincing manner, and there is evidence that care was taken in preparing the text. The Central Hardware Co. have taken care to make known their location in Portsmouth by stating that their store is "One door south of Steahly Bros," though they might have men-

You Will Find....
That the Enterprise Food Chopper will produce a cleaner cut, evener grained, more uniform product, a greater quantity for each revolution of the hand than any other and requires less power to do it.
Four Knives with each Chopper. For chopping sausage and mince meat, hamburg steak, croquettes, cocoanut, horse radish, stale bread and crackers for crumbs, etc.
The Central Hardware Co.
311 Chillicothe St., Phone A [illegible] door South of Steahly Bros.

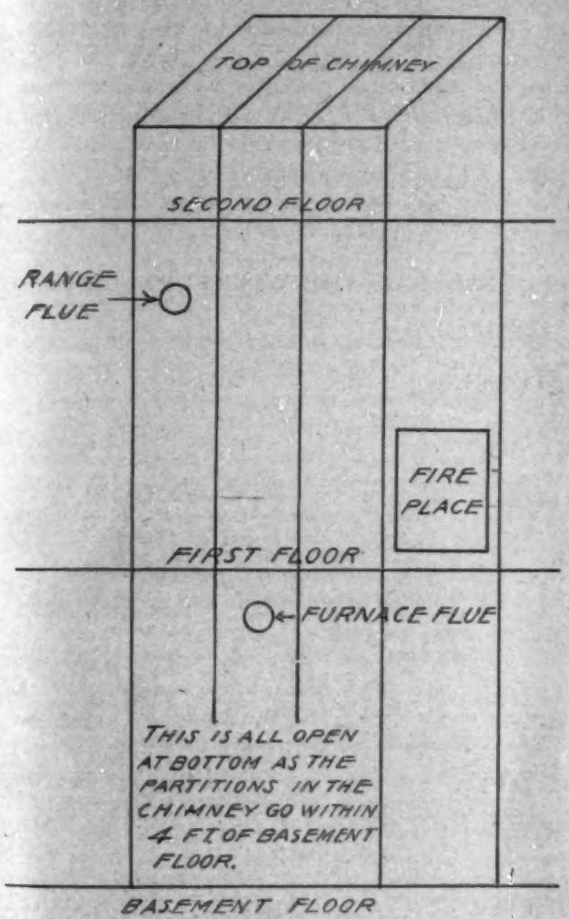
tioned the name of the town as well. It is unfortunate that the compositor in setting up the ad did not select better type for the first and last lines. In the last line especially there are so many broken letters that it is almost impossible to read it. The ad appeared in the *Portsmouth* (O.) *Daily Times* of September 2, and took up 3¾ inches of space two columns wide.

Heating and Ventilating

"UNCLE CHARLIE" REPLIES TO "FURNACE MAN."

To THE AMERICAN ARTISAN:

I would not trouble you again regarding Messrs. Howey & Son's chimney flues, but for the positive language of "Furnace Man" in THE AMERICAN ARTISAN of September 19. Mr. "Furnace Man" may have had a large experience and may think that he knows all there is to know about heating or flues, but he knows just what he knows, and "Uncle


TOP OF CHIMNEY
SECOND FLOOR
RANGE FLUE
FIRE PLACE
FIRST FLOOR
FURNACE FLUE
THIS IS ALL OPEN AT BOTTOM AS THE PARTITIONS IN THE CHIMNEY GO WITHIN 4 FT. OF BASEMENT FLOOR.
BASEMENT FLOOR

Drawing of Chimney.

Charlie" only knows what he knows. When "Furnace Man" says the flue "will *not* work," he says more than he knows, and besides he is not modest or courteous in his language as all furnace men ought to be and generally are.

I have had some experience with flues like the one referred to, and if the flue is of the size and height mentioned in my article in THE AMERICAN ARTISAN of August 22, I have no doubt but that it will draw satisfactorily and that the fire-place opening instead of being a detriment to the draft, will be an advantage, acting as an automatic regulator and helping to ventilate the house.

If Mr. "Furnace Man" and my old friend August Schwein, who lives in Missouri and whose letter appeared in THE AMERICAN ARTISAN of September 19, will visit me, I will be pleased to show them a flue of the kind we are talking about that has been doing good work for fifteen years.

None of us know all about heating, and it is an easy matter to get beyond our depth and if you doubt it, see what hard swimming brothers Prizer and Heald are having. "UNCLE CHARLIE."

WOULD INSTALL AN EXTRA FURNACE.

To THE AMERICAN ARTISAN:

Regarding the question asked by Mr. J. C. Moebus of Butte, Mont., in THE AMERICAN ARTISAN of September 19 under the caption, "A Problem in Warm Air Furnace Heating," I wish to say that Mr. Moebus, in my opinion, is acting wisely in using an additional furnace of suitable size to warm the four additional rooms that have recently been added to the residence referred to.

The 40-inch furnace mentioned as having a rating in excess of the present cubical contents of the building, may not have been installed properly. The pipes may have been too long, too small, or too level, or the cold air duct may have been too small or so constructed that the air didn't get to the furnace.

Furnace manufacturers are generally careful in their ratings of furnaces.

CORRESPONDENT.

NEW SMOKE CONSUMING FURNACE.

Recent experiments that have been made with the new smoke consuming furnace designed by A. L. Snyder, general manager of The Hess-Snyder Co., Massillon, O., manufacturers of the well-known "Boomer" furnaces, have demonstrated, it is said, the absolute smoke consuming qualities of this new furnace. The experiment performed at Massillon on September 1 is said to have demonstrated beyond all doubt that the new furnace of The Hess-Snyder Co. is a practical smoke consuming furnace. The furnace was set on a truck and hauled out into the open where a high flue was erected and a roaring fire started. A large quantity of what was said to be the dirtiest and poorest coal procurable was thrown into the fire, but there was no evidence of smoke issuing from the pipe save a thin wisp that was visible when first the fuel was thrown into the furnace. The effect, however, without the smoke consuming attachment, was quite different. When a damper in the front of the furnace under the fire-door was closed, smoke in great volumes poured from the pipe until the attachment was put in operation again.

The principle of the device is as follows: A narrow door, about two inches wide, capable of being closed and opened by means of a chain, extends directly under the door through which coal is thrown into the fire-pot. The bed of live coals is kept on a level with the lower side of the narrow door. The usual set of dampers furnishes air from below the grates. When it is desired to consume the smoke, the narrow door is opened underneath the coal door, admitting a volume of air which, combining with the gases as they escape from the heated coal, causes them to burst into flame, practically consuming all of the smoke. As soon as the fire begins to burn vigorously

on top and on the bottom, the consumer door may be closed and it will continue to burn for hours, it is said, without giving off smoke.

According to The Hess-Snyder Co., by careful tests that have been made, 20 per cent more heat is to be obtained from each ton of coal by the use of the smoke consuming furnace than by the use of others. It is the intention of the company to build furnaces similar to the one designed by general manager A. L. Snyder. When writing The Hess-Snyder Co., kindly mention THE AMERICAN ARTISAN.

"SCHOOL-HOUSE HEATING AND VENTILATING."

"School-House Heating and Ventilating" is the title of a very interesting and instructive booklet gotten out by the L. J. Mueller Furnace Co., Milwaukee, Wis. In this booklet the "Mueller" system of heating and ventilating school-houses is treated in a very comprehensive manner, a number of illustrations and diagrams appearing throughout the work. The fact is pointed out in the booklet, that, realizing the importance of the subject of school heating and ventilating, many state legislatures throughout the country have, within the past year, enacted laws governing the heating and ventilating of one and two-room schools. Sections of these laws are reprinted in the booklet.

The L. J. Mueller Furnace Co. states that when the "Mueller" system is employed the heat in the school-room is distributed at an even temperature throughout all parts of it, fresh air being admitted through an air duct leading from the outside of the building to the furnace casing, and the supply being regulated by a damper which, due to its unique construction, prevents this outside air from passing into the school-room until it is thoroughly heated, thus obviating all drafts through the room. The removal of foul air is accomplished by drawing it through a ventilating register placed in the base of the chimney and passing it out into the atmosphere. By means of the "Mueller" system, it is said, the cold air at the floor is drawn through grilles at the bottom of the heater casing into the air chamber, where it is heated, thus avoiding the strata of cold air which is very often present near the floor of the room. The "Mueller" system is, the originators say, in strict compliance with the laws inaugurated in the different states, and has met with the approval of state school superintendents. A number of "Mueller" furnaces, which form the basis of the "Mueller" system of heating and ventilating, are shown in the booklet which the L. J. Mueller Furnace Co. is sending out with price-list. When writing for it kindly mention THE AMERICAN ARTISAN.

THE "AKRON" AIR-BLAST FURNACE.

The "Akron" air-blast furnace, made by The May-Fiebeger Co., Akron, O., is said by the manufacturers to represent all that is best in furnace construction. The success attained by the "air-blast" is due, the company says, to applying the air scientifically, and not expanding it by heating. This has been demonstrated, the company asserts, in all sections of the country by the successful use of the different kinds of fuel, more especially of soft coal. The company's patent "air-blast" forms a retort, which is, they say, the only process by which all the gases are extracted, thereby creating good combustion, and burning up nearly all of the black smoke of soft coal, and utilizing the heat of the gases frequently lost in some types of furnaces. No part of the "Akron" air-blast furnace is enveloped in the fire, the makers say, so that it will not burn out. The fire-pot and feed section are extra heavy, being strengthened with heavy ribs. The melting heat is said to be drawn away from the radiator. The fire-pot of this furnace has wings extending outward from its sides, giving additional strength and increasing the heating capacity, it is said. Being nearly perpendicular the lodging of ashes is prevented. The radiator of the "Akron" air-blast furnace is made from specially prepared iron sheets and the tubes are said to be of the best soft steel. The May-Fiebeger Co. says that this furnace can be depended on to perform satisfactory service at all times. A catalogue may be had for the asking. When writing for it kindly mention THE AMERICAN ARTISAN.

FURNACES OF THE WISE FURNACE CO.

The Wise Furnace Co., Akron, O., is distributing a very attractive folder advising the trade to "Get wise to some furnace truths" contained therein. Incidentally, it is pointed out in the folder that "Wise People Buy 'Wise Furnaces.'" The Wise Furnace Co. states that their furnaces are satisfactory to the dealer who sells them and the buyer who enjoys them. The company says that their furnaces use little fuel, last long, are easy to erect and operate, and are constructed on scientific gas and smoke-consuming principles. Wise furnaces are made to burn all kinds of fuel—soft coal, hard coal, coke, wood or lignite. They are of all cast iron construction, and are made in seven sizes. The Wise Furnace Co. is said to have some good territory open for agents who may be looking for a line of furnaces that the company guarantees will prove ready sellers. When writing the Wise Furnace Co. kindly mention THE AMERICAN ARTISAN.

BETTER FURNACES AND BETTER INSTALLATION.

BY GEO. E. WILTSIE, OF THE KEITH FURNACE CO., DES MOINES, IA.

The following paper was read at a meeting of the Midland Club held at the Auditorium Hotel, Chicago, on August 1:

I am requested by my employer, Mr. R. S. Keith, to formulate an infliction for the Midland Club relative to the better installation of warm-air furnaces, and also to deal with the subject of better furnaces. It may be as well to take up the latter proposition first, as in furnace work it is essential to make the beginning with the furnace. It is also necessary to have some basic point of beginning, and in view of this fact I am reminded of the earliest furnace job of which I have any authentic record. In the fifteenth chapter of Genesis, seventeenth verse (I quote from boyhood memory and may be incorrect) you will find it recorded that the Lord showed Abraham a "smoking furnace and a burning lamp." Graciously handing the lamp over to "Standard Oil" as things seem to be coming or rather going this way or both going and coming, let us be content to deal only with the furnace. Abraham's testimonial does not appear in the record and I take the liberty to conclude that the smoking feature

did not make a big hit with him. Neither is there any evidence that the furnace was gotten up solely as a "competition" proposition,—except the fact that it had acquired the habit of "smoking."

There has been improvement along the line of furnace construction since that early morning, and there is a disposition on the part of some manufacturers to better their product at all times, and because of their persistency in that direction we now have a number of well-made, well-proportioned furnaces, capable of doing good work for a long term of years.

"DEVIL'S DREAMS."

The incentive to increase the volume of business by offering a low-priced article of inferior quality both as to weight and general construction, has led some of the manufacturers of creditable goods down the line, until quite a percentage of their output could very properly be classified as "Devil's Dreams." I am very well aware that there is a demand for them, and have learned that where the demand is for that class of goods, there you will find the furnace trade demoralized as to prices and furnaces generally in bad repute, as the manufacturer has set the pace in the matter of cheapening, and the dealer has followed along nicely with eight-inch pipes, and an inexpensive and insufficient cold-air supply, and the results reach clear from the customer to the manufacturer, and naturally take in everybody engaged in the business, the same as running a freight train through a country town sidewise would wipe it off the map. Perhaps I am "knocking." I do not intend to. I simply have summed up some of the findings that are in evidence to the road man, and an abiding memory of the example of the late George Washington and his little hatchet episode, prompts me to state the facts, and leave the necessary pruning to the Midland Club.

BETTER INSTALLATION.

As to better installation, there is a lamentable lack of experienced help to be had, and as a result many furnaces are installed by men who have little or no knowledge of the business. I find hardware salesmen, whose houses are jobbing furnaces, taking an active interest in marketing them, and who do not know, and do not claim to know, any more about furnace installation than a Duroc Jersey pig knows about side pockets. I find pump men, implement men, windmill men, in fact anybody of a nervous temperament and who cannot sleep, eligible to the attractive game of "furnace installation," and many times regardless of whether their commercial rating entitles them to credit or not. In no case do they know to a certainty what the job has cost them, after the offense has been committed, and the next contract is always taken on the basis of the previous one, and there they go merrily on from bad to worse, both as to installation and profits. And from worse they make their exit in a year or two, like a drop of sap from a boy's nose, leaving the field wide open, to John D., Morgan, Harriman, and others, who are supposed to be on the look-out for good things.

FACTS TO BE OBSERVED.

Brother Jones, I would be pleased to pilot the Midland Club over my "jack-rabbit circuit" on a tour of investigation, and acquaint them with the conditions of the furnace trade as they exist (Jones to pay the freight), as to quality, prices, time and eternity, and various other things that might interest them. Pardon me from digressing—furnace installation was the question, I believe. Let us suppose that Mr. Hammer was the hardware dealer. He informs me that his customer, Mr. Brown, Black or Ballou, as the case may be, wants a furnace. Omitting incidentals, let us suppose again that I am introduced and labeled "furnace man" (not necessarily "hot-air"). The first thing to do in a case of that kind is to ascertain what kind of a building the furnace is wanted for; how large it is; how it is divided; the location of the chimney, and the size of the same; where the furnace can be located; how about the cellar stairs; the opportunity to mortise a trench in the earth in order to reach the parlor with a pipe sufficiently large to warm the room on a cold Sunday evening, when it is shut off from the balance of the house and the young man has made his appearance for the purpose of holding somebody's hand; how many 8x8 girders to run under the posts that come right bang in the way, etc. When you have the situation clearly within your mental grasp, you are ready to make an estimate of the cost of installation. Allow me to suggest that right here is the place to get down to business, and determine the cost of the job complete, itemized in detail from the furnace down to the paste on the overalls. When the cost has been arrived at, the profit can be added. If Mr. Hammer is on to his job you can depend on him to add enough to afford him a living profit after doing the work well, otherwise he will not want it at all.

MAKING THE SALE.

We are now ready to approach the customer and effect the sale, which sometimes occurs. How naturally we come to the point of installation—sort of gravitate to it occasionally. The furnace should be of ample capacity and of proper form to do the work easily in the coldest weather. A central location is preferable. Say, for instance, that the furnace is of a pattern that holds the products of combustion closely in contact with the heating surface on the inside until it reaches the smoke collar and presents an exterior easily accessible to the upward flow of air over every part of it on the outside. Say, for example, that it has a 46-inch casing, and the total area of space between the furnace and the casing aggregates 750 square inches. The furnace should be piped to the full amount of its air-carrying capacity, regardless of the size of the pipes necessary to warm the rooms, for the reason that when the warmth is being generated it had better be admitted into the rooms rather than held within the furnace casing. The cold-air supply should be equal to the outlet. Mr. Heald made that all quite plain in a paper read before your club recently. Where the construction of the furnace will permit it, I favor admitting the cold air through the lower casing rather than going underneath or using a pit, as it is commonly called, and I absolutely refuse to install a furnace with a long underground cold-air duct. I am dealing with inside circulation, and a gravity system is slow in working, and unless the pipes are short for both cold and hot air, the job will work sluggishly, and that means expensively and unsatisfactorily.

There is such a large variety of shapes and sizes of buildings to be warmed with furnaces and so many obstacles in the way of producing good results, that a treatise on furnace installation, comprehensively written, would scarcely cover the whole ground, and the experience one gains from years of active effort is difficult to transmit to others.

I like the business better than running for Congress. Mr. Fueller thinks the business can be bettered. Perhaps so. The desire of the manufacturers to unload goods onto parties of doubtful credit will not do it. In my opinion encouraging a dealer to take contracts, at little or no profit, will not do it. A determined stand for better goods, and better work, and better prices *will* do it. Let us all get together and boost.

PARAGRAPHS.

The Paonia Plumbing Co. of Panonia, Colo., has recently been organized to engage in the heating, tinning and plumbing business. H. B. French is manager of the company, and announces that they will be open for business about October 1.

E. H. Roberts of the Roberts Heating & Ventilating Co., Minneapolis, Minn., died recently in that city. He entered into the furnace and hardware business at Winona, Minn., many years ago, the business having been conducted under the firm name of Landon & Roberts. In 1897 Mr. Roberts went to Minneapolis where he founded the company of which he was the moving spirit up to the time of his death. The deceased was widely known in the Northwest as a man of integrity and of sound business principles.

The Fox Furnace Co., Elyria, O., are advertising an attachment that goes in all Fox furnaces that is said to burn gas economically, and should the gas be shut off coal may be burned in the furnace without disconnecting or making any changes. The gas comes in at the bottom of the fire-pot, giving the full radiation thereof and of the balance of the furnace. The Fox Furnace Co. will be pleased to furnish their catalogue upon request. When writing for it kindly mention THE AMERICAN ARTISAN.

The Forest City Foundry & Mfg. Co., Cleveland, O., calls the attention of the trade to the "Monarch" air-blast coal furnace. In this furnace the sectional upper fire-pot is so constructed that oxygen is fed into and above the fuel burning the gases, insuring economy and cleanliness. The Forest City Foundry & Mfg. Co. makes the well-known "Imperial," "Niagara" and "Combination" furnaces, also registers, mail-boxes, hitching and sash weights, etc. The company's new catalogue may be had for the asking. When writing for it kindly mention THE AMERICAN ARTISAN.

Tinshop

TWO METHODS FOR MAKING BALLS.

BY G. L. GRAY.

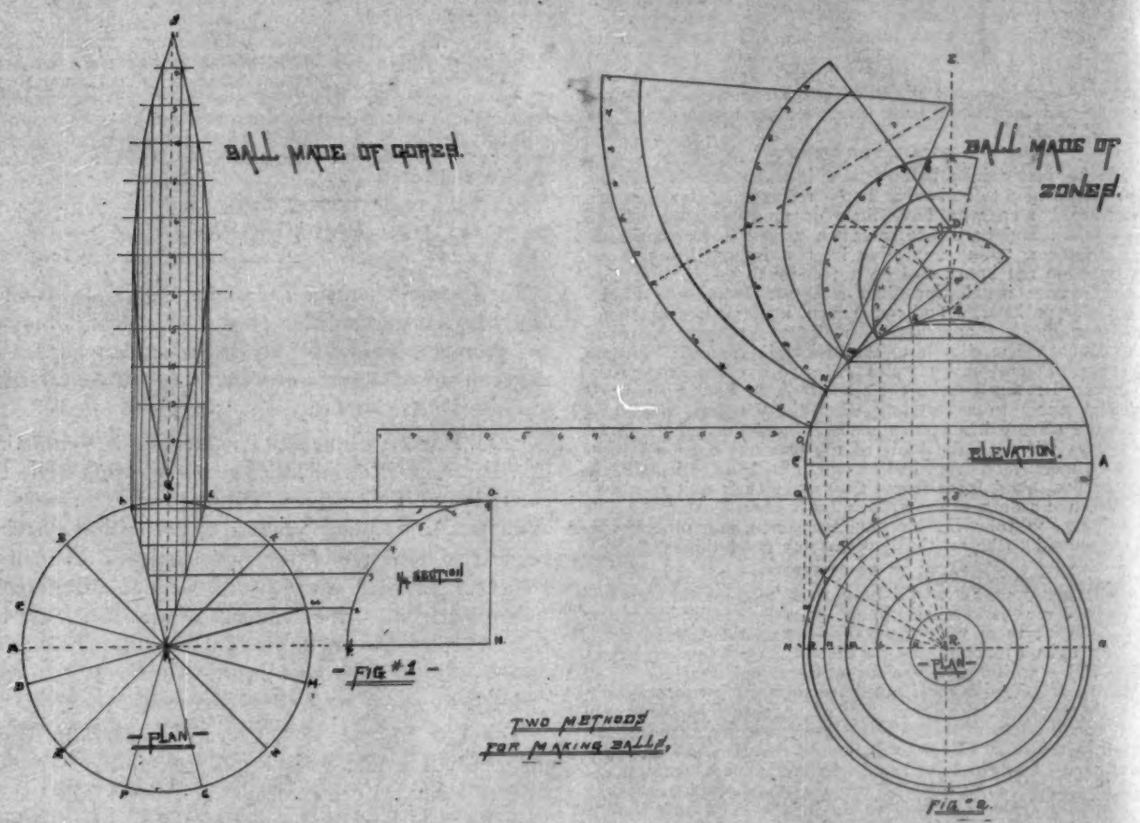
To Make a Ball by Means of Gores.

First strike a circle the required size of ball and erect center line R S. Space the circle into the required number of equal parts, R U being the center of gore; space half a space each side of U as A L, and draw lines A R and L R which form the miter lines for gore. Draw line R N and erect line N O at right angles with line M N, and with the compasses set the distance R U. Set point at N and draw quarter-circle O P, which forms an exact quarter-section of ball. Space quarter-section O P into any convenient number of equal spaces as shown by 1, 2, 3, 4, 5, 6, 7; with compasses already set, place point at Q on center line Q S; space off stretchout 1, 2, 3, 4, 5, 6, 7, 6, 5, 4, 3, 2, 1; place the T-square at right angles with line Q S; draw lines indefinitely, intersecting the stretchout points 1, 2, 3, 4, etc.; place T-square parallel with line M, N and draw lines 2, 3, 4, 5, 6, 7, of quarter-section, intersecting miter lines R L and R A. Place T-square parallel with center line R S, and bring it successively against the points in the miter lines R A and R L, drawing the lines across corresponding numbers in the stretchout; a line traced through the intercepting points in the stretchout will give the pattern of a section or gore.

A perfectly round ball can be made by placing the gores on a raising block and raising them to the exact circle.

To Make a Ball in Any Number of Parts by Means of Zones.

First draw a circle the required size of ball, in this case to be made in 11 parts, A, B, C, which represents the elevation. Erect the center line I E indefinitely; divide the elevation into the required number of sections as shown, B, K, L, M, N, O; from these points draw at right angles with center line I E below elevation; taking R as center, draw plan of the ball shown by G, H, I, J. Draw line G R H from points K, L, M, N, O in plan; drop lines to the corresponding letters on line R H of plan. Taking R as radius point, strike circle K, L, M, N, which represent the seams of points O N in elevation, until it intersects center line at E; strike sweeps N and O indefinitely, and space quarter-circle H J into a convenient number of spaces, as O, 1, 2, 3, 4, 5, 6, and with the compasses already set, space zone O N on sweep O, 1, 2, 3, 4, 5, 6, 5, 4, 3, 2, 1, O, drawing dotted line O E which completes pattern for one O N.

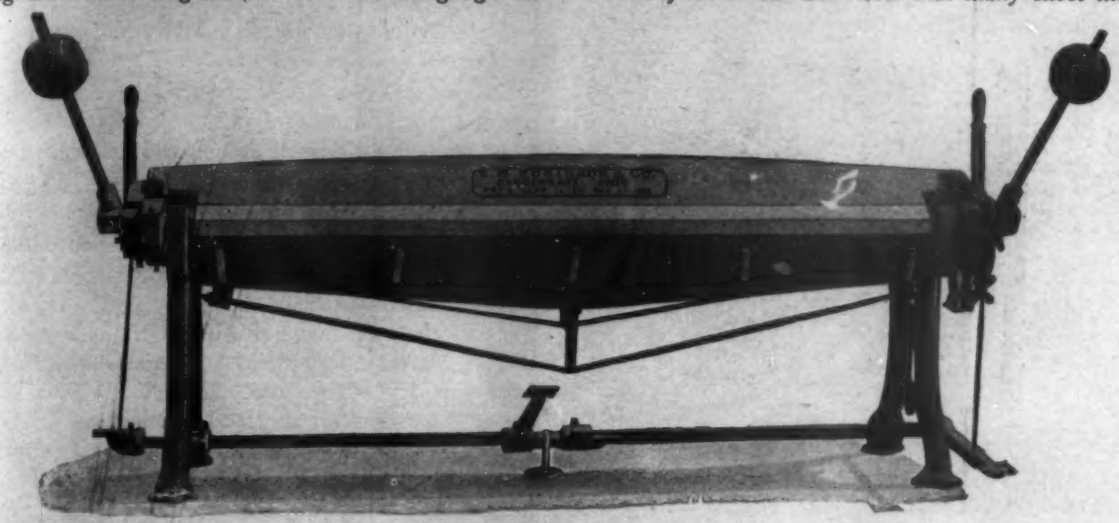


The other three zones N M, M L and L K are gotten by the same method as O N, the center zone being a straight strip, the stretchout being spaced from J H in plan, same as zone O N, the top or smaller section marked R in plan being a flat circle. When the different parts are all raised the exact circle, they will form a perfectly round ball.

SHEET METAL WORKING MACHINE.

The J. M. Robinson Mfg. Co., 3282-3288, Spring Grove ave., Cincinnati, O., manufacturers of sheet metal working machinery, say that their cornice brake, which they have put on the mar-

ket, has become very popular among sheet metal workers. Making a specialty of sheet metal working machinery, The J. M. Robinson Mfg. Co. is continually keeping abreast of the times in the way of manufacturing machinery to meet all requirements for up-to-date labor-saving devices in sheet metal working. A machine such as is shown in the accompanying illustration is guaranteed for No. 20 gauge material and lighter, No. 18 gauge being manipulated without difficulty when equipped with heavy bending attachments. With each brake there are furnished 2½-inch, 2-inch, 1½-inch and 1¼-inch wood formers, and 1-inch, ⅞-inch and ¾-inch iron formers. Friction clamps for holding the forms are also furnished. The cornice brake is fitted with four treadles, quadrant gauge, and three quadrant stops. The machine is guaranteed by The J. M. Robinson Mfg. Co. to be substantial and durable and to perform efficient service. When writing for descriptive literature and prices kindly mention THE AMERICAN ARTISAN.



The J. M. Robinson Mfg. Co's. Cornice Brake.

THE RUBY REPAIR OUTFIT.

In the accompanying illustration is shown the Ruby repair outfit of the Ruby Chemical Co., Johnstown, O., which consists of a bottle of Ruby soldering fluid, with solder and full directions, enabling even the most inexperienced to do almost any kind of repair work at home. The Ruby Chemical Co. has brought out this outfit bearing in mind the fact that more and more of the articles in common use in the household and on the farm, formerly made of wood and other materials, are now being made of sheet metal. By the use of the Ruby repair outfit, it is said, any man or woman is enabled to repair easily and quickly any article of tin, brass, copper, galvanized and granite ware, and with no tools except such as may be found in every home, a common stove poker, for instance, performing the work of a regular soldering copper.

Ruby Repair Outfit.

Since placing the Ruby soldering fluid on the market, the Ruby Chemical Co. states that many sheet metal workers and electricians using the flux have asked for a metal receptacle in which to carry it out on job work, and accordingly the company has introduced the Ruby fluid fountain brush, which is said to be practical in every way, always ready, and suitable for the pocket, work-box or bench. The company says that this brush is to the metal worker, pattern maker and electrician what a fountain pen is to the man who has much writing to do. When writing the Ruby Chemical Co. for literature and prices, kindly mention THE AMERICAN ARTISAN.

DESIGNS OF WM. FOSTER & SONS SHEET METAL WORKS.

Catalogue "A" of Wm. Foster & Sons Sheet Metal Works, 1,000 East Carpenter street, Springfield, Ill., contains numerous artistic designs of the firm's metal ceilings and side walls. The patterns are new and original and admit of the highest degree of ornamentation. After several years of experimenting and close application, this concern has designed a machine for cutting beads in their dies after being cast at the

Foster's Metal Ceiling.

foundry, doing away with an irregular shrinkage very frequently found when dies are cast at the foundries. By cutting the beads into dies after casting a square, they say that an accurate plate is assured, which means good joints and a saving in the cost of erection. This feature alone, Wm. Foster & Sons Sheet Metal Works believe, makes their metal ceilings equal to any now on the market. The firm makes the announcement that their modern and up-to-date plant, operated under an

Foster's Metal Ceiling.

aggressive policy of advance, is surrounded by exceptional facilities for shipping, and that these advantages, together with their modern ideas, have resulted in placing them in the front rank of manufacturers of metal ceilings and side walls. When writing for catalogue "A" kindly mention THE AMERICAN ARTISAN.

NOTES AND QUERIES.

MAILING CASES.

From The Kraus & Grau Hardware Co., Port Washington, Wis.

Where can we get mailing cases similar to sample?

Ans.—Western Box Company, 42 River Street, Chicago.

ASBESTOS POWDER FOR ARTIFICIAL FIRE-BACKS.

From W. E. Good, Kewanee, Ill.

Where can I get dry asbestos powder suitable for making artificial fire-backs?

Ans.—Keasbey & Mattison Co., 208 E. Lake Street, Chicago.

ADDRESS OF ROTARY SPECIALTY CO.

From Thos. Conron Hardware Co., Danville, Ill.

Where is the Rotary Specialty Co., formerly the Rapid Tool Works, located?

Ans.—9-13 S. Union Street, Chicago.

PLUMBING SUPPLIES.

From O. U. Mutz, Edinburg, Ind.

Where can I get plumbing supplies?

Ans.—L. Wolff Mfg. C., 93 W. Lake St., Chicago; James B. Clow & Sons, Franklin & Harrison Sts., Chicago.

ITEMS.

The St. Louis Metalware Co. of St. Louis, Mo., has [illegible] its capital stock from $8,000 to $30,000.

[illegible]eath is announced at Kingston, N. Y., of Clark [illegible] one of the oldest tinsmiths in the United [illegible] Mr. Parsons died on September 10 at the age of 82 years. He was formerly an employe of the Canfield Stove Co. of Kingston.

The Oklahoma Roofing & Supply Co. of Oklahoma City, Okla., contemplates the erection of a warehouse. Edward Dunning is general manager of the company.

The Dorsett-DeMarrais Co. of Hoboken, N. J. has been incorporated with a capital stock of $20,000 to manufacture sheet metal specialties. The incorporators are Timothy W. Dorsett, Albert Vilaret, Jos. A. DeMarrais.

Follansbee Bros. Co., Pittsburg., have received a contract for Follansbee Banfield process roofing tin to be used on all domes, gutters and decks of a new church that is being erected at Anderson, Ind. The company still gives with this tin its guarantee that should it fail to give satisfactory service during a period of 15 years, it will be replaced free of charge.

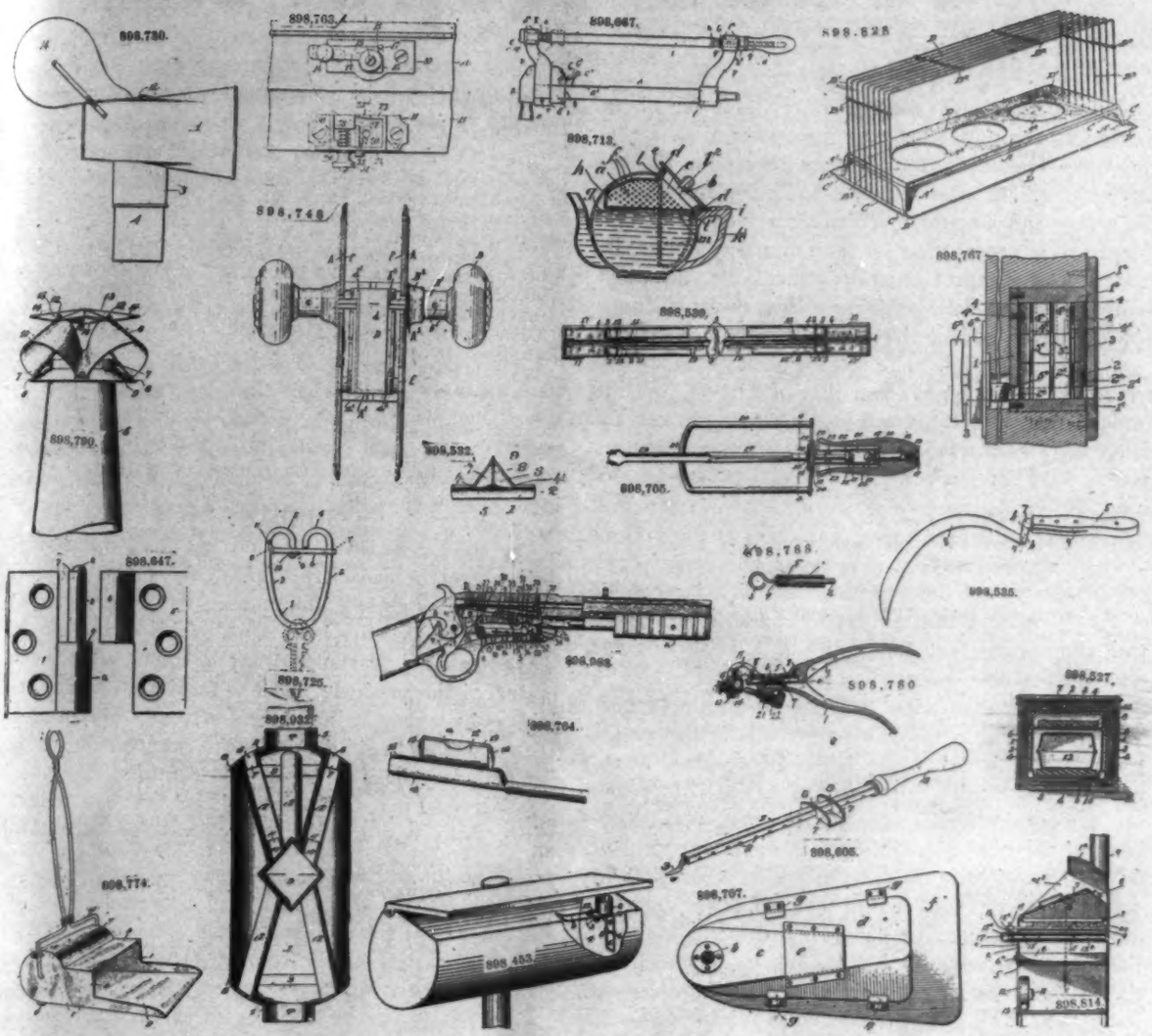
As previously announced in THE AMERICAN ARTISAN the 1909 convention of the National Association of Master Sheet Metal Workers will be held at Louisville, Ky. The Louisville local is already making arrangements for the 1909 meeting and is giving considerable attention to the entertainment program. The Louisville local is a wide-awake association and it goes without saying that the national association will be well taken care of when it meets in that city next year.

Relative to the manner in which specially denatured alcohol is used in the preparation of soldering flux, the acting commissioner of Internal Revenue, Washington, D. C., states that the following formula has been authorized: "To 100 gallons of ethyl alcohol add five gallons of approved wood alcohol. The wood alcohol shall be subject to the same specifications as are imposed upon the wood alcohol used in completely denatured alcohol, which are set forth in section 26, Part 1, of the revised regulations."

The Niagara Machine & Tool Works, Buffalo, N. Y., manufacturers of machines and tools for sheet metal workers, are sending out miniature souvenir snips which appear to be as substantially constructed as it is possible for such articles to be. They are very neat in appearance, the black handles contrasting well with the polished blades. The concern is also sending out a post card on which are illustrations of some of the sheet metal working machinery manufactured by them. When writing the Niagara Machine & Tool Works kindly mention THE AMERICAN ARTISAN.

Clayton & Lambert Mfg. Co., Detroit, Mich., say that their No. 1 C. & L. fire-pot produces a hotter flame and uses less gasoline than most makes now on the market. The burner of this fire-pot is capable of every needed adjustment, and is the outgrowth, the makers say, of over twenty years' practical experience. The No. 1 C. & L. fire-pot is guaranteed to heat the heaviest irons in the shortest possible time, at the same time melting a kettle of lead or solder. The No. 1 can be used as a torch or brazing fire. The Clayton & Lambert Mfg. Co. will be pleased to forward a booklet giving detailed information concerning their fire-pots. When writing for it kindly mention THE AMERICAN ARTISAN.

NEW PATENTS.



898,453. Coin-Receptacle for Rural Mail-Boxes. William Esselburn, Harrisville township, Medina county, Ohio. Filed Feb. 15, 1908. Serial No. 415,995.

898,527. Fireless Baker. Alvin T. Thoits and John G. Gronberg, Grand Rapids, Mich., assignors to Caloric Fireless Cookstove Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 4, 1908. Serial No. 414,287.

898,532. Sight for Firearms. Edward R. Tufts, Pittsburg, Pa., assignor of one-half to Charles E. Greenough, New York, N. Y. Filed Aug. 3, 1906. Serial No. 329,025. Renewed March 24, 1908. Serial No. 422,961.

898,535. Sickle. Hugo Volckmann, Watertown, Wis., assignor to Washington Cutlery Company, Watertown, a Corporation of Wisconsin. Filed Nov. 25, 1907. Serial No. 403,597.

898,539. Window-Screen. James A. White, Philadelphia, Pa. Filed Dec. 12, 1906. Serial No. 347,418.

898,605. Can-Opener. Raymond A. Rodgers and William R. Henderson, Steubenville, Ohio. Filed April 17, 1908. Serial No. 427,654.

898,647. Hinge. Harry M. Herr, Lampeter, Pa. Filed Nov. 22, 1907. Serial No. 403,345.

898,667. Combination-Tool. John I. Melton, Cincinnati, Ohio. Filed Feb. 4, 1907. Serial No. 355,581.

898,704. Razor-Blade Holder. Joseph R. Torrey, Worcester, Mass. Filed Jan. 17, 1908. Serial No. 411,310.

898,705. Razor-Stropping Device. Joseph R. Torrey, Worcester, Mass. Filed Jan. 17, 1908. Serial No. 411,311.

898,707. Ironing-Board. Benjamin T. Ward, Saratoga, N. Y. Filed May 9, 1907. Serial No. 372,821.

898,713. Teapot. Arthur E. Wilson, Newlands, Glasgow, Scotland. Filed Nov. 9, 1907. Serial No. 401,511.

898,725. Key-Ring and Door-Securer. Lyman M. Cooper, Flint, Mich., assignor of one-half to Alfred Adair, Flint, Mich. Filed Feb. 17, 1908. Serial No. 416,267.

898,730. Ventilator. William H. Davidson, Boston, Mass., assignor of one-half to W. Osgood Eddy, Middleboro, Mass. Filed Apr. 10, 1908. Serial No. 426,246.

898,748. Lock. Henry F. Keil, Bronxville, N. Y. Filed May 14, 1906. Serial No. 316,656.

898,763. Window-lock. Leon G. Miller, New York, N. Y. Filed May 8, 1908. Serial No. 431,572.

898,767. Lock. Alfonso Mercer, Norfolk, Va., assignor of one-fourth to Herbert E. Page and one-fourth to William R. Butcher, Norfolk, Va. Filed Dec. 30, 1907. Serial No. 408,691.

898,774. Dust-Pan. Josephine M. Niver, Chicago, Ill. Filed May 18, 1907. Serial No. 374,321.

898,780. Saw-Set. William M. Potter, Syracuse, N. Y., assignor to E. C. Stearns & Co., Syracuse, N. Y. Filed Dec. 28, 1901. Serial No. 87,570.

898,788. Curtain-Fixture. Charles A. Scheif, Pittsburg, Pa. Filed Sept. 11, 1907. Serial No. 392,292.

898,790. Chimney Cap and Ventilator. August A. Schupinsky, Milwaukee, Wis. Filed April 29, 1907. Serial No. 370,788.

898,814. Broiling-Stove. Julius H. Zehring, Columbus, Ohio. Filed Jan. 13, 1908. Serial No. 410,592.

898,828. Self-Supporting Shelf for Cook-Stoves. Augusta L. Brown, Chicago, Ill. Filed Nov. 21, 1906. Serial No. 344,521.

898,932. Stovepipe-Drum. Louis J. B. Schnug, Saginaw, Mich. Filed Nov. 6, 1907. Serial No. 400,978.

898,988 Firearm. James W. Price, Konawa, Okla. Filed Nov. 9, 1907. Serial No. 401,486.

Trade Report.

HARDWARE.

So far this month the hardware trade has been marked by a continued buying from all sections of the country. The bulk of the orders represents the replacement of stocks which were badly depleted during the spring and summer, and there is at present a good movement in preparation for the fall and winter trade. Manufacturers report orders for small lots still much in evidence and their aggregate is very satisfactory. Jobbers have good-sized stocks but these are moving slowly to the retailer. The volume of business in September will show a gain over that of August, and the trade is rapidly getting into better shape. Prices are fairly well maintained. In some cases manufacturers are anxious for business and concessions are obtainable. It is recognized, however, in many quarters that the absence of a big buying movement at the present means larger orders later in the year, and manufacturers generally, are holding their supplies for outside prices. Good inquiries are reported and it is the general expectation that there will be a brisk business after the first of October.

Orders for wire nails still have a routine aspect. The bulk of the business in progress is in the way of small lots, although some fair-sized contract orders have been booked. Specifications against old orders are coming in freely and this is the real backbone of the market. Mills are in operation to about 60 per cent of their capacity, which is expected to increase shortly. It is believed that jobbers are increasing their stocks against a good fall demand, owing to the numerous requests for immediate shipment. In the local market demand shows a little improvement, with prices firm. Cut nails continue to improve on demand. Barb wire orders are beginning to show the advent of the fall trade, which is expected to reach large proportions. New business at present is not large but manufacturers are optimistic over the future. Makers of plain wire report a heavy volume of business which is increasing from week to week. Specifications on old contracts are also still heavy.

The base price of wire nails at the mill is $1.95 per keg. The jobbing price is $2 at the mill for full carloads, $2.10 at the mill for less than carloads and $2.40 out of store. The base price of cut nails at the mill is $1.80 per keg. The jobbing price is $1.85 for full carloads at the mill, $1.95 for less than carloads at the mill and $2.25 out of store.

In the Chicago market wire nails are quoted at $2.13; painted barb wire, $2.28; galvanized barb wire, $2.58; smooth annealed wire, $1.98; smooth galvanized wire, $2.28; galvanized staples, $2.53; polished staples, $2.23. Quotations to retailer in car lots are 5 cents higher and in less than car lots 15 cents higher.

TIN PLATE.

New business in tin plate continues of small proportions. The big seasonable demand is over, but mills are busy and will be busy for some time to come on old contracts. Consumers are sending in specifications more freely. Prices are $3.89 for 100-pound coke plates f. o. b. New York and $3.70 at Pittsburg mills, with the independents quoting $3.65.

Am. coke tins, I. C., from store, New York:	
Bessemer steel, 107 lbs., 14x20	$4.35@4.40
Bessemer steel, 100 lbs., 14x20	4.20@4.25
Bessemer steel, 95 lbs., 14x20	4.10@4.15
Bessemer steel, 90 lbs., 14x20	4.00@4.05
Am. charcoal terne, 8-lb. coating—	
Worcester grades, 14x20, 107 lbs	4.30@4.35
Worcester grades, 14x20, 100 lbs	4.15@4.20
Worcester grades, 20x28, 200 lbs	8.05@8.10
For prompt shipment, f. o. b. mill—	
Coke, tins, 14x20, I. C	3.85@3.90
Coke, tins, 14x20, 100 lbs	3.70@3.75
Coke, tins, 14x20, 95 lbs	3.65@3.70
Coke, tins, 14x20, 90 lbs	3.60@3.65
Charcoal, terne, 20x28, I. C	7.30@7.35
Charcoal, terne, 20x28, 200 lbs	7.00@7.05

Usual difference for odd sizes and weights.

SHEETS.

The sheet mills of the country are being operated to 65 per cent of capacity. Taking the plants that are not in shape to work, this means that 75 per cent of the effective capacity is at work. This is the largest showing of the year and it may be improved. Sheets is one of the products that are carried in stock, and jobbers have scarcely any to select from. The producers are willing to aid the dealers to carry stocks, as the demand for the fall trade will continue until cold weather sets in. Galvanized sheets are best sellers, while there is also a better demand for corrugated sheets.

The following are New York prices for 500-bundle lots and over, f. o. b. mill:

	Galvanized Net.
No. 30	4.05
No. 29	3.80
No. 28	3.65
No. 27	3.35
Nos. 25 and 26	3.15
Nos. 22 and 24	2.95

COPPER.

There is a weaker feeling in the market for ingot copper, but the actual decline has thus far been principally confined to speculative markets and to sales from second hands. For the best grades of lake copper 13⅞ cents is the top price asked by most producers, but the largest interest is reported to have sold at 13¾ cents, though afterward the asking price was put back at 14 cents. For lake, from the producer's standpoint, 13¾@13⅞ cents is about the market, with electrolytic at 13½@13⅝ cents and casting brands at 13¼@13½ cents. The above prices are for spot copper, the quotations for October and November delivery being fractionally higher than the above figures. The demand for domestic consumption is still very slow, and there is considerable disappointment being expressed by previous buyers over the decline in prices from the recent high level. The large consumers are not using over 60 per cent of their normal supply, and there does not seem to be much hope of a material improvement for some time to come. One of the strongest features of the present situation is the continued active demand for export, and though the bear operators have a good

deal to say about the unsalability of American copper abroad, their statements are not borne out by the statistical figures of actual exports. The London market is weaker and lower, having declined £1 17s 6d on spot and £1 7s 6d on futures during the week. Sheet copper is firm and unchanged, the base price being 18 cents. There has been no change in yellow metal, quotations being 17 cents for dimensions, 15 cents for sheathing and sheathing nails, 16 cents for slating nails and 17 cents for keel and stem metal.

Extreme fluctuations for this year:

	Highest.	Lowest.
Electrolytic copper, spot	13⅞	12¼
Lake copper, spot	14	12⅝
Casting copper, spot	13¾	12⅛

PIG IRON.

There have been very few developments worthy of note in the pig iron market during the past week. The situation improves very slowly, and yet the current changes are all in that direction. The bulk of the local demand is still for deliveries running through the rest of the year, though some of the furnaces report more interest being shown in next year's business. There are a good many inquiries in the market for delivery in 1909, but as yet comparatively few have resulted in actual business. The orders placed lately have been generally for moderate amounts of iron, and large orders are the exception and not the rule. The foundry men report some improvement in business, and there is a very general belief that the market will show a very much better tone after election. The consumption of pig iron for August showed an increase over any other month this year, having been 1,233,000 tons, against 2,126,000 tons in August, 1907. There is a somewhat easier tone in the market, as would naturally happen after so long a period of dulness, but whatever shading has been actually done has been confined to the northern furnaces, as the Alabama furnaces are holding their product very firmly. There has been some increase in the production of Alabama iron since the coal strike was settled, but the leading furnaces are so well sold up that there is not likely to be any surplus iron. There is no special change to note in quotations, the Alabama furnaces still quoting $12.50 @13 f. o. b. Birmingham, with some of them asking full $13 for what little they have for sale. For Virginia iron the quotation is unchanged at $18.50@19. The market for Pennsylvania iron is slightly easier, though the quotation is nominally unchanged.

CHICAGO MARKET.

Lake Superior charcoal	$19.50
Northern foundry No. 1	17.00@17.50
Northern foundry No. 2	16.50@17.00
Northern foundry No. 3	16.00@16.50
Southern foundry No. 1	17.35@17.85
Southern foundry No. 2	16.85@17.35
Southern foundry No. 3	16.35@16.85
Southern foundry No. 4	15.85@16.35
Southern No. 1, soft	17.35@17.85
Southern No. 2, soft	16.85@17.35
Southern Gray forge	15.60@16.10
Southern mottled	15.35@15.60

PITTSBURG MARKET.

No. 1 foundry	15.60@16.10
No. 2 foundry	15.25@15.50
Gray forge	14.65@14.90
Bessemer	15.90@16.15
Basic	15.40@15.65

BIRMINGHAM MARKET.

No. 1 foundry	13.00@13.50
No. 1 soft	13.00@13.25
No. 2 foundry	12.50@12.75
No. 2 soft	12.50@12.75
Gray forge	11.00@11.50

Rogers, Brown & Co., Cincinnati, will say in their weekly report: "Aside from current small orders in good volume and the improvement in shipments on old past due contracts the iron market in the Central territory has been without much interest.

"There have been one or two good sized lots of forge grades disposed of and the demand for the lower class of iron is in excess of the supply. Several furnaces having contracts for mill and forge grades have been making foundry iron and are behind on shipments.

"The larger consumers are buying generously but in small lots and the life of the market as existing for several weeks is maintained without any special interest in long time delivery. Furnaces seem to be discouraging this class of buying as it is of very uncertain nature, and many consumers expecting to get propositions for next year on the basis of spot figures or a slight advance, are disappointed and relinquish their efforts to bring about the transaction.

"A round lot of Valley iron recently sold at what was considered a price somewhat under the market caused some appprehension. The tonnage was for prompt movement and the furnaces making the sale have a good stock on hand and recently have been more energetically going after business than many of their competitors. It is not believed the transaction will have any harmful effect on the market.

"General business conditions with foundries appear to be growing steadily better and the iron received by them is going promptly into their melt. There has been given out some small railroad business, rolling stock and rails, and the improvement in the building industries has resulted in increased orders for structural work, but all of small total. In the industrial and financial outlook there is very little that is disturbing as to the future. The slow progress of things at the present time is due to political disturbances and it is only reasonable that a large reaction toward a higher plane should take place after the election.

"In the South the Birmingham District is fast returning to its usual busy times immediately following the settlement of the labor controversy which has been ruling there for some time past. There is a demand for labor at that point and everything is reported to be improving daily. In spite of the vast improvements made in the Birmingham District in the last few years, the enlarging of plants, with the addition of new ones, is to continue on a great scale and it is even so far predicted that pay rolls in the Birmingham District will be more than doubled in the next three years.

"There is no change in the coke situation beyond increasing difficulties of manufacture, due to the continued lack of water in all districts. Furnace coke is in good demand. Prices are firm for nearby delivery, the better grades of Foundry coke are good sellers, but as considerable amount of contracting was done some time ago this branch is slow."

Matthew Addy & Co., Cincinnati, will say in their weekly report: "The pig iron market just now is largely a matter of the temperament of the last man with whom you discussed it—opinions differ widely. There are many consumers and producers who read all the signs of the times favorably. They translate into good omens all that they see or hear or know, and then there are others who contend that there is really no distinct market—that it is all a go-as-you-please affair—and that the result of the election will make or mar the iron situation. It is really a fact that just now the personal equation in the absence of decisive facts is playing a wonderfully large role in the pig iron trade, and the man who habitually looks at the world through rose-colored glasses and his pessimistic brother who always wears blue glasses, both find in the situation just the things they want to find. The optimist says that more iron is being used and the other chap says less iron is being bought—and both are correct.

"There is a good demand for coke and it is being consumed in much larger quantities than was the case three months ago.

"Our own opinion is that the market is slowly getting in shape for better things."

Current Hardware and Metal Prices.

THE AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly.

METALS.

FIRST QUALITY BRIGHT PLATES.

		Per Box.
IC	14x20	$6 40
IX	14x20	7 45
IXX	14x20	8 60
IXXX	14x20	9 85
IXXXX	14x20	11 00
IC	20x28	13 70
IX	20x28	15 70
IXX	20x28	18 15
IXXX	20x28	20 55
IXXXX	20x28	22 95

COKE PLATES.

Cokes, 180 lbs	IC	20x28	$ 8 5
Cokes, 200 lbs	IC	20x28	9 00
Cokes, 216 lbs	IC	20x28	9 50
Cokes, 270 lbs	IX	20x28	11 25

PIG IRON.

North'n Fdy., No. 1	$17 50@$18 00
North'n Fdy., No. 2	17 00@ 17 50
North'n Fdy., No. 3	16 50@ 17 00
Southern Fdy., No. 1	17 35@ 17 85
Southern Fdy , No. 2	16 85@ 17 35
Southern Fdy., No. 3	16 35@ 16 85
Southern Fdy., No. 4	15 85@ 16 35
Southern No. 1 Soft	17 35@ 17 85
Southern No. 2 Soft	16 85@ 17 35
Southern Gray Forge	15 60@ 16 10
Southern Mottled	15 25@ 15 60
Lake Sup. Charcoal	19 50@ 20 00
Southern Silveries, 4% Silicon	18 85@ 19 35
Southern Silveries, 5% Silicon	19 35@ 19 85
Southern Silveries, 6% Silicon	19 85@ 20 35
Jackson Co. Silveries, 6 per cent	19 90@ 20 40
Jackson Co. Silveries, 8 per cent	20 90@ 21 40
Jackson Co. Silveries, 10 per cent	21 90@ 22 40
Malleable Bessemer	17 25@ 17 75
Standard Bessemer	18 25@ 18 75
Alabama Basic	16 85@ 17 35

BLACK STEEL SHEETS.

No. 12 per 100 lbs.	$2 20@$2 30
No. 14 per 100 lbs.	2 25@ 2 35
No. 16 per 100 lbs.	2 35@ 2 45
Nos. 18-20 per 100 lbs.	2 60@ 2 65
Nos. 22-24 per 100 lbs.	2 65@ 2 70
No. 26 per 100 lbs.	2 70@ 2 75
No 27 per 100 lbs.	2 75@ 2 80
No 28 per 100 lbs.	2 85@ 2 95

GALVANIZED

No. 10 per 100 lbs.	$3 05@$3 10
Nos. 12-14 per 100 lbs.	3 05@ 3 10
No. 16 per 100 lbs.	3 05@ 3 10
Nos. 18-20 per 100 lbs.	3 15@ 3 25
Nos. 22-24 per 100 lbs.	3 30@ 3 35
No. 26 per 100 lbs.	3 50@ 3 55
No. 27 per 100 lbs.	3 70@ 3 75
No. 28 per 100 lbs.	3 90@ 4 00

POLISHED SHEET STEEL.

No. 24 per 100 lbs	$4 90
No. 26 per 100 lbs.	5 00
No. 27 per 100 lbs.	5 10
No. 28 per 100 lbs.	5 20

SMOOTH STEEL.

Wood's Smooth, No. 20	$3 05
" " No. 22-24	3 10
" " No. 25-26	3 15
" " No. 27	3 20
" " No. 28	3 30

PATENT PLANISHED SHEET IRON.

Patent Planished Sheet Iron, "A" $10.20, "B" $9 20

PATENT PLANISHED SHEET STEEL.

Dickey Planished Sheet Steel 8½c

SOLDER.

XXX Guaranteed ½ & ½	per lb. 18 c
Commercial ½ & ½	per lb. 17½c
No. 1 Plumbers	15½c

SHEET ZINC.

500 lb. Casks	case, per cwt. $7 15
300 lb. Casks	per cwt. 7 15
Sheets	per cwt. 7 15

COPPER.

Copper sheet, 100 lbs. over, base 17c

TIN PIGS AND BARS.

Banca, pigs, per lb	29 c
Straights, pigs, per lb	29 c
Straights in bars, per lb	33 c

LEAD.

American Pig	4 c
Bar	4 c
National (White) brands (in less than 100 lb lots), per lb	8½c

Sheet.

Full coils	per 100 lbs. $0 00
Cut coils	per 100 lbs. 9 50

HARDWARE.

ADZES.

Carpenters'.

Plumbs 40%

Coopers'.

Barton's	20%
White's	15%

Railroad

Plumbs 40%

Ship.

Plumbs	40%
White's	12½%

AMMUNITION.

Caps, Percussion—per 1,000.

F. L Waterproof, 1-10s	40c
G D	35c
Musket	60c

Shells, Loaded—

Loaded with Black Powder	40%
Loaded with Smokeless Powder, medium grade	40 & 5%
Loaded with Smokeless Powder, high grade	40 & 10 & 10%

Union Metallic Cartridge Co.:

New Club, Black Powders	40%
Nitro Club, Smokeless Powders	40 & 5%
Arrow, Smokeless Powders	40 & 10 & 10%

Winchester:

Smokeless Repeater Grade	40 & 5%
Smokeless Leader Grade	40&10&10%
Black Powder	40%

Gun Wads—per 1,000.

Winchester Gun Wads 15%

Powder.	Each.
DuPont's Sporting, kegs	$ 50
" " ½ kegs	2 50
" " ¼ kegs	1 40
Dupont's Sm'k'less, 50-lb. drum	22 45
" " 25-lb. kegs	11 30
" " 12½-lb. kegs	5 80
" " 6½-lb. kegs	2 97
" 1-lb. cans	15

Shot.

Drop shot, sizes smaller than B, 25-lb. bags, per bag	1 95
Drop shot, B and larger sizes, 25-lb. bags, per bag	2 20
Buck Shot, 25-lb. bags, per bag	2 20
Chilled Shot, 25-lb. bags, "	2 20

ANCHORS

Expansion Screw Anchors 10%

ANVILS

Trenton, 70 to 80 lbs.	9½c per lb
Trenton, 81 to 150 lbs.	9½c per lb

ASBESTOS.

Board and Paper 33⅓%

AUGURS.

Boring Machine	70%
Irwin's	40&10%
Carpenter's Nut	70%
Hollow.	
Bonney's—list $30.00	75&5%
Stearns, No. 3	$6 00
Post Hole.	
Digwell, 8-inch per dos.	12 50
Iwan's Post Hole and Well	40%
Vaughan's, 4 to 9-in., per dos.	6 25
Rafting.	
Snell's	50&5%
Ship.	
Ford's, with or wi'out screw	40-12½%
Snell's " " "	40-5%

AWLS.

Brad.	
No. 3 Handled per dos.	$0 40
No. 1050 Handled "	80
Shouldered, assorted, 1 to 4, per gro.	$1 20
Patent asst'd, 1 to 4 "	85
Harness.	
Common "	95
Patent "	90
Peg.	
Shouldered "	1 20
Patent "	60
Scratch.	
No 1 handled "	4 80
No. 15, socket handled per dos.	1 25
No. 7 Stanley	1 80
Sewing.	
Common per gro.	90
Patent "	90

AXES.

Boy's Handled.	
Lippincott, 3 lb. per dos.	$6 00
Falls City "	6 00
Broad.	
Plumbs, West, Pat	33⅓%
" Can. Pat	40%
" Firemen's (handled) per dos	$1, 75
Plumbs, Miners' (handled) "	6 75
Single Bitted (handled)	
Gladiator, 3 to 4 lbs, per dos	$11 00
Flint Edge " " "	9 25
Standard " " "	9 25
Elec Chopper, Forest Clipper	10 50
Perfect Premier " "	10 00
Crown " "	7 00
Single Bitted (without handles)	
Gladiator, 3 to 4 lbs. per dos.	$5 50
Flint Edge. " "	7 00
Standard " "	7 00
Electric Chopper " "	8 25
Perfect " "	7 75
Crown " "	6 25
Double Bitted (without handles).	
Gladiator, 3 to 4 lbs. per dos.	11 50
Flint Edge. " "	9 75
Perfect " "	11 00

The above prices on axes of 3 to 4 lbs. are the base prices.

3½ to 4½ lbs advance 25c
4 to 7 lbs. advance 50c.
4½ to 5½ lbs. advance 75c.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$2.50	3.75	4.50	5.00

BALANCES, SPRING.

Frary's	40%
Pelouse	20%

BARS, CROW.

Pinch or Wedge Point, per cwt. $3 75

BASKETS.

Clothes.	
Small Willow per dos.	$7 00
Medium " "	8 75
Large " "	10 50
Galvanized Iron.	½ bu. 1 bu. 1½ bu.
Per doz	$4 75 6 50 8 00

BEATERS.

Carpet.	per doz.
No. 10 Coppered Spring Wire	$0 90
No. 12 Spring Wire	1 10
No. 10 Preston	1 10
Egg.	Per doz.
No. 50 Imp. Dover	$0 75
No. 102 " " tinned	85
No. 150 " " hotel	1 40
No. 10 Heavy hotel tinned	2 10
No. 13 " " "	3 30
No. 15 " " "	3 60
No. 18 " " "	4 50

BELLOWS.

Blacksmiths'	65%
Hand.	
8-inch per dos.	$3 50
10-inch "	10 50
Moulders'.	
12-inch "	12 50

BELLS.

Call.	
3-inch Nickeled Rotary Bell, Bronzed base per dos.	$5 00
Cow.	
High Grade	60%
Kentucky	65&10%
Door.	Per dos.
New Departure Automatic	$6 00
Rotary.	
3 -in. Old Copper Bell	4 00
3 -in. Old Copper Bell, fancy	6 00
3 -in. Nickeled Steel Bell	4 50
3½-in. Nickeled Steel Bell	5 00
Hand.	
Hand Bells, polished	50&5%
White Metal	40%
Nickel Plated	30%
Swiss	40&33⅓%
Silver Chime	33⅓%
Miscellaneous.	
Church and School, steel alloy	50%
Farm, lbs. 40 50 75 100	
Each $1.25 1.60 2.25 2.85	

BEVELS, TEE

Stanley's, rosewood handle, new list	25%
Stanley's iron handle	25%

BINDING, OILCLOTH.

Zinc	80%
Brass	70&10%
Brass plated	75&5%

BITS.

Auger.	
Extra Double Spur	70&10%
Pord's Car and Machine	40&10%
Triumph	50&5%
Ford's Ship	40&10%
Irwin	50%
Russell Jenning's	25&10%
Clark's Expansive	60%
Steer's " Small list, $22.00	25%
" " Large " $26.00	25%
Irwin Car	45%
Ford's Ship Auger pattern Car	40&10%
Center	40&10%
Countersink.	
No. 18 Wheeler's per dos.	$1 25
No. 20 " "	1 75
American Snail head "	75
" Rose " "	90
" Flat "	75
Mayhew's Flat "	1 25
" Snail "	1 25
Dowell	
New Jennings	40&10%
Gimlet.	
Standard Double Cut	60%
German Pattern per dos.	$0 60
German "	65
Gouge "	80
Spoon "	80
Countersink "	1 00
Reamer.	
Jenning's Square "	2 50
Standard Square "	75
German Octagon "	75
Screw Driver.	
No. 7 Common "	80
No. 1 Triumph "	1 25
No. 2 " "	1 —
No. 340 Shepardson's "	—
No. 1 Smith's "	—

BLACKING, STOVE. (See Polish).

BLADES, SAW.

Butchers'.
Standard, ¾ & 1¼-in.....40%
Clock Spring.....40%
Star.....15%
Coil.....each, $1 50
Hack.
Disston's.....25&5%
Flexible.....33⅓&5%
Star.....20&5%
Wood.
Jackson's.....per doz. $2 25
Disston's—No. 6, 16, 26 & 045.. 4 25
Triumph..... 3 50
Forest Clipper..... 3 00

BLOCKS.

Snatch.
Wooden.....60&10%
Steel.....50%
Tackle.
Iron Strapped.....70%
Com. Steel.....60%

BOARDS. (New List)

Stove.....50&10%
Wash.
Globe, single.....per doz. $2 50
Globe, double..... " 3 35
Peace Maker..... " 3 00
Crystal Glass..... " 4 00
Brass King..... " 4 00
Nickel Plate..... " 4 15

BOBS, PLUMB.

Carpenters'.
No. 2, iron.....per doz. $0 65
No. 00, " ..... " 1 30
No. 0, " ..... " 1 80
No. 3, lead..... " 2 90
No. 4, " ..... " 3 40
No. 113, brass plated.. " 1 10
No. N30, nickel plat'd. " 1 30
No. N31. " " " 1 85

BOLTS.

Carriage, Machine, etc.
Carriage, ¾x6 and sizes smaller and shorter.....70&10%
Carriage, sizes larger and longer than ¾x6.....60&5%
Machine, ¾x4 and sizes smaller and shorter.....70&10%
Machine, sizes larger and longer than ¾x¾x4.....60&5%
Elevator.....50-10&5%
Plow.....60&10%
Stove.....50&10%
Tire.....75%
Wagon Box Strap.....70%
Mortis, Door.
Gem, iron.....60%
Gem, bronze plated.....20%
Barrel.
Cast.....60%
Wrought.....
Wrought, bronzed.....50%
Flush.
Wrought.....50&10%
Spring.
Wrought.....
Wrought, heavy.....
Square.
Cast.....50&10%
Wrought.....

BORERS.

Angular.
Miller's Falls.....per doz. $13 00
Bung.
Dox.
Enterprise Mfg. Co.'s No 1... $14 00
" " " No 2.. 18 50

BOXES

Mail, No..... 1 2 10
Per doz.....$3.50 5.00 17.50
Miter.
New Langdon.....15&5%
Stanley's.....30%
Seavey's.....each, $1 50

BRACES.

Barber's.....50&10&10@50&10&15%
Fray's Genuine Spofford's.....60%
" Nos. 66 to 146.....50%
" No. 0108..... $3 50
" No. 08..... 2 75
" No. 010..... 2 55

BRACKETS.

Hay-Rack.
Wenzelmann's No. 1, per doz. $9 00
" No. 2, " 9 60
Shelf.
Cast Iron, bronzed.....50-10&5%
Clover Wrought Steel.....70&10%
Clover Folding.....70%

BROILERS.

Wire.....70%
No. Cwron, Self-basting, 80los .. $3 50

BUCKETS.

Pump, Rubber.
Wychoff.....per gro. $4 75
Cooper..... " 4 75
Champion..... " 7 50
Victor..... " 9 25
Star..... " 5 00
IXL..... " 6 75
Well.
Galv'd Qts..... 10 12 14
Per doz.....$2.00 $3.25 $3.40
Wooden, top ear, plain, per doz. 4 00
" " swivel, " 5 10

BUCKS, SAW.

Folding.....per doz. $2 10

BURRS, RIVETING.

Copper Burrs only.....30%
Tinners' Iron Burrs only.....65&5%

BUTTS.

Cast Iron.....70&5%.
Wrought Brass (New List).....40%
Wrought Steel, Bright.
Wrought Steel, Japanned.
Nos. 731 and ....70&10%

CALIPERS.

Double.....65&5%
Inside and Outside.....65&5%
Wing.....70%

CALKS.

Logger's Boot.
(Lufkin R. Co.'s), per M..... $3 75
Toe.
Shoenberger.....per lb 5 c
Bessemer..... " 4½c
American..... " 7 c
Swedes..... " 8½c

CANS.

Cheese Factory.
Ontario Pattern.
Gallons..... 20 30 40
Each..... $4.25 $5.00 $6.25
Milk.
Hoistain.
Nos..... 300 301 302
Gals..... 5 8 10
Per doz.....$26.00 $27.00 $29.00
Chicago Pattern.
Nos..... 105 108 110
Per doz.....$19.00 $21.50 $23.00
Iowa Pattern.
Nos..... 408 410
Per doz..... $23.50 $24.50
New Elgin Pattern.
Nos..... 705 708 710
Per doz.....$25.00 $27.00 $28.00
Burn Pattern
Nos..... 700 701
Gals..... 8 10
Price..... $2.40 $2.65

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.
Diamond, Regular.....each, $3 25
Diamond, Sling..... " 6 50
Myers' Imperial ..... " 3 85
Myers' Clover Leaf..... " 4 00

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing.....50&10%
Bed.....60&5%
Common Plate.
Brass Wheel.....60&10%
Iron and porcelain wheels, new list.....60&5%
Philadelphia Plate, new list.....70%
Martin's.....60%
Payson's.....75&10%

CATCHERS, GRASS.

Carroll's, No. C.....per doz. $4 25
Wildermuth's,.
Nos..... 1 2 3
Per doz.....$5.00 $5.75 $6.25
Nos..... 4 5 6
Per doz.....$6.75 $9.50 $10.00

CHAIN AND CHAINS.

Breast Chains.
Doubleslack.....doz. pairs, $5 75
With Covert Snaps. " 5 00
With Slide..... " 3 25
Without Slide..... " 2 55
Bright Ox Chains.
¾-in. $7.25; ½-in. $5.45 per 100 lbs.
Cable Coil Chain.
Inch..... ⅜ ½ ⅝ ¾
Per 100 lbs.$10.50 $8.00 $7.00 $6.20
Inch..... ⅞ 1 1¼ 1½
Per 100 lbs.$6.00 $5.90 $5.75 $5.65
Inch..... ¾ 1 1¼
Per 100 lbs.....$5.55 $5.55 $5.65
Cable Loc Chain.
Advance 25c per 100 lb. on Cable Coil.
Cow Tie Chains.
American, 2 toggle.....50&5%
" toggle and snap...50&5%
" open and closed ring.....50&5%
Halter Chains.
American, new list.....33⅓%
German.....60%
Niagara, new list 40%
Brown's, " 40%
Picture Chains.
Light Brass, 3 ft.....per doz. $0 65
Heavy Brass, 3 ft .... " 1 00
Pump Chain
Galvanized, per 100 lbs.....$5 50
Safety Chain.
Brass.....60%
Special Steel Loading Chain.
Inch..... ½ ⅝ ¾
Per 100 lbs.....$10.00 $13.50 $12.50
Stretcher Chains.
⅜-in. $8.50; ½-in. $7.75 per 100 lbs.
Tie-Out Chains.
Brown's.....70&5%
Trace Chains.
Western Standard.
6— 6-2.....per pair 30c
6— 8-2..... " 34c
6— 8-3..... " 33c
6—10-2..... " 38c
7 — 8-2..... " 38c
7 —10-2..... " 42c
7 —10-1..... " 48c
7 —10-0..... " 60c
Add 2c per pair for Hooks.
Add 2c " for Twist Link.
Wagon Stay Chains.
Inch..... ½ ⅝ ¾
Per 100 lbs.....$6.50 $6.00 $5.80

CHALK, CARPENTERS'.

Blue.....per gro. 75c
Red..... " 65c
White..... " 55c
Common White School Crayon..... 8c

CHARCOAL.

In bags..... per bag 90c

CHECKS, DOOR.

Blount.....33⅓%
Sargent's.....33⅓%

CHIMNEY TOPS.

Iwan's Volcano.....50%

CHISELS.

Box.
Inches..... 10 12 14
Round per doz....$2.10 $2.25 $2.75
Flat " ... 2.85 3.00 4.20
Cold.
Good quality, ¾ in. and larger.....per lb. .12c
Smaller size per doz.....
Socket, Framing and Firmer.
Clover.....75&10%
Tanged, Firmer.
With handles..... 30&5%
Choppers, See *Cutters, Meat.*

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.....per doz. $6 25
Yankee, for Yankee Screw Drivers..... 5 00

CHURNS.

Anti-Bent Wood,
Gal..... 5 7 10
Each.....$3.90 $4.60 $4.85
Belle, Barrel.....65&7½%
Common Dash, Gal. 4 5 6
Per doz..... $7.75 $8.50 $10.50
Union, Gal..... 5 7 10
Each.....$3.65 $3.90 $4.75

CLAMPS.

Adjustable.
Martin's.....30%
Carpenters'.
Steel Bar.....25%
Hose.
Sherman's, brass, ½-in., per doz.. 42c
Double, brass, ½-in., " 90c
Saw Filers.
Disston's list, $30.00.....30%
Stearns', No. 0, $3.50; No. 1, $11.50; No. 3, $5.00 doz.
Wentworth's, No. 1, $6.00; No. 2 $7.50,

CLAWS, TACK.

Cast, wood hdle..... ver doz.45@60c
Forged steel, wood hdle " $0.80
Solid steel..... " 1 00
Giant..... " 50

CLEANERS.

Drain.
Iwan's Adjustable.....55%
Iwan's Stationary.....40&5%
Pot.
Wire.....per doz. $0 55
Side-Walk.
Steel.....per doz. $3 25
XLCR .....65&5%

CLEAVERS

Family.
Griffin, Inch..... 6 7 8
Per doz.....$5.50 $5.75 $6.25
Royal.....per doz. 2 25
Butchers.
Plumbs.....25%

CLEVISES

Malleable .....5½c lb.

CLIPPERS.

Bolt.....$1.90@4.75

CLIPS.

Axle.....55&5%
Damper.
Standard.....per doz. 25c
Troy..... " 30c
Hame..... " 17

CLOTH.

Emery.
Star.....30%
B. & A.....50%
Hardware Wire—full rolls (100 ft.)
2 to 3 incl., Galv.—in full roll... 2 75
4 and 5..... " .. 3 00
6..... " .. 3 25
7 and 8..... " .. 3 75
Screen Wire.
12 mesh, painted, per 100 sq. ft.. 1 35

COCKS AND FAUCETS.

Compression Plain Bibbs...60, 10&5%
Lever Bibb Cocks.....60, 10&5%
Compression Hose Bibbs . .50—10&5%
Telegraph Faucets (new list)..50—5%
Racking Cocks (new list)...60, 10&5%
Compression Lock C'ks(new list).70%
Andrew's Brass Faucets.....70%
Angle Plug Faucets, per doz.... $0 85
Milk Can Faucets, per doz..$2.60—4.20
Petroleum Faucets .....75&5%

COLLARS, STOVE PIPE.

Inches..... 5 6 7
Plain Tin..per gro.$1.90 $2.40 $3.50
Japanned Tin " 3.00 3.00 4.25
Lacquered Brass" 3.00 5.50 4.25

COMBS, CURRY.

Nos... 000 11 15 39 89 196
Per Doz..$.37 .60 1.90 .90 1.15 .80
Nos... 299 320 350 532 620 1400
Per Dos.$1.05 .85 1.35 1.20 .75 1.40

COMPASSES.

Carpenters'.....60—10—10%
Pencil—Faber's.....per dos. $1.00

COPPER—See Metals.

COPPERS.

Soldering.
1 lb.....per lb 30c
1½ lb.....31c 2 lb... " 29c
3 lb and larger..... " 26c

CORD.

Picture
White Wire (new list) .....55&10%
Sash.
Monarch Braided Flax...per lb
Silver Lake, white, 7-32 in. "
Silver Lake, white, 8-32 in. "
Keystone.....8-32 in. " 29c

CORKSCREWS.

Humason & Beckley.....33⅓%
Walker's.....33⅓%
Williamson's Regular.....40&10%
Williamson's Forged Worm.....50%

COTTERS, SPRING.

All sizes—new list.....90&30%

COUPLINGS, HOSE.

Brass.....per doz. $
Brass Plated..... " 85

COVERS, WAGON—See Tents.

CRADLES, GRAIN.

Morgan's Grapevine....per dos.$30 75

CRAYONS—See Chalk.

CROW BARS.

inch or Wedge Point.....per lb 3½c

CUTTERS.

Glass.
Red Devil.....45%
Smith & Hemenway Co.....50%
Woodward.....40%
Meat.
Enterprise, Nos. 5, 10, 12, 22, 32 and 42.....25%
No. 202, list, $1.50 ea.....40&7½%
Pipe.
Stanwoods. No.... 1 2 3
Each.....$0.85 $1.50 $4.00
Slaw and Crout.
3-knife Crout.....per dos. $9 75
1-knife Slaw..... " 1 65
2-knife Slaw..... " 2 25
Washer..... " 7 75

DAMPERS, STOVE PIPE.

Jewel.....50&10%
American..... 50%

DIES AND STOCKS.

Discount..... 40%
King's, Little Giant..... 33⅓%

DIGGERS.

Post Hole.
Acme.....per doz. $9 25
Atlas..... " 9 00
Eureka..... " 7 50
Hercules..... " 10 25
Iwan's Split Handle.. " 7 50
Iwan's Perfection.... " 9 00
Iwan's Hercules pattern " 10 00
Ryan's..... " 17 00
See also Augers—Post Hole.
Dividers, Wing.....65&10%

DOOR CHECKS—See Door.

DOORS, SCREEN.

⅞ in. 4-panel, painted...per dos. $7 93
1⅛ in. 4-panel, painted... " 9 50
1⅛ in. 3-panel, natural pine, fancy..... " 12 40

DOOR HANGERS—See Hangers.

DRILLS.

Bit Stock.....60&10%
Blacksmith's Twist.....60%
Breast.
Fray's No. 9.....each, $1 75
Millers Falls No. 12..... " 2 10
Hand.
Goodell's Automatic.
Nos..... 01 03 3 20
Per dos.. $7.75 $12 50 $12.50 $11.00
Goodell's Single Gear. per doz. 15 75
Millers' Falls " " " 12 75
" " Double " " 15 25
Reciprocating.
Goodell's.....per dos. 16 50
Bit Stock.
Standard List.. 60&5%@60%@10

DRIVERS, SCREW.

Standard.....65&10%
Lock Ferrule.....60%
Champion.....40&10%
Champion Patten.....70%
Clark's Interchangeable.....30%
Edison.....60%
Reed's Lightning.....45&5%
Goodell's Spiral.....50, 10, 5&2½%
Yankee Ratchet.....50%
" " Spiral.....50&10%
Smith & Hemenway Co.....40&5%

EAVES TROUGH, GALVANIZED.

Terms, 2% for cash. Factory shipments generally delivered.
See also conductor pipe and elbows.

EGG BEATERS—See Beaters.

ELBOWS.

Adjustable Stove.
Inches..... 5 6 7
Smooth, per dos...$0.75 $0.85 $1.20
Plan'd, " 1.80 2.00 2.65
Corrugated Conductor.
Discount.....75&10%
Corrugated Stove.
Inches..... 5 6 7
Smooth, per dos..$0.85 $1.00 $1.50
Pol'd, " .. 1.40 1.65 2.25
Plan'd, " .. 2.15 2.65 3.40
Four-Piece Stove.
Inches..... 5 6 7
Smooth, per dos..$0.60 $0.65 $0.95
Planished, " .. 1.40 1 70 2.30

EMERY CLOTH—See Cloth.

EMERY TURKISH.

Size.....5-lb. pkgs, ½ kegs, kegs.
No 60 to 150, per lb.... 6c 4c 4c
Flour..... " ... 5c 3½ 3c

ENAMEL, IRON.

A-B Iron Enamel, 3 dos. case, ...per gro., 15 00
Peerless..... 1 25

EXTRACTORS, PIG.

See Forceps, Pig

EYES.

Bright Wire Screw—See Goods, B. W.
Drifting Pick.....60, 10&5%
Hooks and—
Brass.....50&10%
Iron.....70%

FASTENERS, STORM SASH.

Schroeder's.....per dos. $0.85
Sensible..... " 1 15

FAUCETS—See Cocks.

FILES AND RASPS.

Delta.....70%
Kearney & Foot.....75&10%

FLUE STOPPERS—See Stoppers.

FORCEPS, PIG.

Superior.....per dos. $4 75
Whisson's Imp..... " 5 25

FORKS.

These goods are sold net this year.
Barley.
Steel New List.....65&10%
Wood, 4-tines, per dos.....$5 00
Coal, Coke, Cottonseed.....30%
Hay.
2-tine.....60%
3 " .....60&5%
4 " .....60&10%
Digging.....65&5%
Scoop.....30%
Header.
3-tine.....60&5%
4 " .....60&5%
Manure.
4-tine.....60%
Ore.....40%
Spading.

FRAMES.

Hack Saw.
Union.....per doz. $5 75
Jenning's adj..... " 7 50
Cast..... " 2 50

FREEZERS, ICE CREAM.

Arctic.
Qts..... 1 2 3 4 6
Each...$1.10 1.30 1.50 1.80 2 30
Qts..... 8 10 12 15
Each.....$2.95 3.90 4.50 5.20

GAUGES

Butt and Rabbet.
Cream Pail.
Fairmont.....per dos. $3 75
Marking, Mortise, etc.....
.....50&10%
Saw.
Wire.
Disston's.....25%

GIMLETS.

Discount.....35@40%

GLASS, WINDOW.

Single.....90&20%
Double.....90&25%

GLASSES, LEVEL

GLUE.

Bulk.
B Amber.....per lb. 12 c
A White..... " 15 c
H. S. Amber..... " 16½c
Liquid.
Army & Navy.....40%
Le Page's—
List "A".....37½%
List "B".....33⅓%
List "C".....25%

GOODS.

Bright Wire.....90%

GREASE, AXLE.

Wood Boxes.
Diamond.....per gro. $5 50
Frazer's..... " 9 50
Hub Lightning..... " 5 25
Paragon..... " 6 75
Wood Pails.
Frazer's, 15 lb. 80c; 25 lb. $1.20 each.
Hub Lightning, 15 lb. 55c; 25 lb. 70c each.
Tin Cans.
Chamellene Graphite.
1 lb. per gross.....$9 50
3 lb. per gross.....25 00
5 lb. per gross.....37 00

GRIDDLES.

Soapstone.....33⅓%

GRINDSTONES.

Family.
Inches..... 7 8 9
Per dos.....$8.25 9.00 10.50
Loose.
Per ton.....$20 00@$21 00
Mounted.
Ball Bearing..... 1 2 3
Each.....$3.15 3.00 2.85
Common Bearing 1 2 3
Each.....$3.00 2.80 2.65

GUN WADS
(See Ammunition.)

HAFTS, AWL.

Brad.
Common.....per dos. $0 19
Peg.
Common..... " 22
Patent, plain top..... " 47
Patent, leather top... " 52
Sewing.
Common..... " 22
Patent..... " 52

HALTERS.

Jute Rope.....per dos. $1 10
Sisal Rope..... " 1 55
Web..... " 2 00
Leather, rope tie..... " 8 50
Leather, leather tie..... " 11 50

HAMMERS, HANDLED.

Blacksmiths' Hand.
Plumbs.....60&5%
Engineers'.
Plumbs.....60&5%
Farriers'.
Plumbs.....40&10%
Machinists'.
Plumbs.....60&5%
Nail.
Plumbs.....40&7½%
Quaker City.....per dos. $3 50
Cast..... " 1 15
Maydole's.....30&5%
Riveting.
Plumbs.....40&12½%
Shoe.
Cast.....per dos. $0 75
Tack.
All Iron.....per dos. $0 35
Pol'd Iron, Hickory hdl. " 50
Mall. Iron, Inlaid..... " 1 55
Magnetic..... 1 2 3
Per dos.....$0.70 .80 1.00
Magazine.. .....per dos. 4 75

HAMMERS, HEAVY.

Heavy Hammers and Sledges.
Under 5 lbs .....80&5%
5 lbs. and over.....80&10%
Masons'.
Single and Double Face.....80&5%

HANDLES.

Auger.
Common Assorted....per dos. $0 26
Peck's Adjustable.... " 2 10
Ives' Adjustable.....per set, 1 35
Axe.....60%
Chisel.
Hickory, Tanged Firmer, Assorted, 33c; Large, 38c per doz.
Hickory, Socket Firmer, Assorted, 27c; Large, 30c per doz.
Applewood, Tanged, Firmer, Assorted, 29c; Large, 33c per doz.
Applewood, Socket, Firmer, Assorted.....per dos $0 24
Coal Pick.....50&10%
Drifting Pick.....50&10%
File, assorted, 13c; Large, 16c per doz.
Hammer.
Adze Eye.....per dos. $0 40
Blacksmiths'..... " 40c@70c
Machinists'..... " 45c@70c
Hatchet..... " 40
Hay and Manure Fork.....30%
Hoe and Rake.....30%
Plain.....per dos. $0 75
Varnished..... " 90
Screw Driver.
Assorted..... " 27
Large..... " 48
Shovel and Spade.....33⅓%

HANGERS.

Barn Door.
Nansen.....60&10%
Matchless.....70&10%
Storm King.....60%
World's Best.....50%
Wagner's Adjustable.....70&10%
Warehouse.....60%
Conductor P.
Griffin.....70&10%
Iwan's Perfection.....50%
Eave Trough.
Baker's.....per gro. $2 25
Imperial.....20%
Wire.....33⅓%
Parlor Door.
Acme.....per set, $3 75
Ives' Improved..... " 2 50
Lane's Standard..... " 3 50
Lane's New Model.... " 3 10
Le Roy Noiseless..... " 4 00
Richards'.....40-10&5%

HASPS.

Hinge, Wrought.....40%
With Staples—See Staples.

HATCHETS.

Crown.....60-10&5%
Cast Claw.....per dos. $1 10@1 35
Cast Shingling.... " $0 85@1 10
Germantown.....30%

HAY KNIVES.

See Knives.

HAY RACK BRACKETS.

Wensleman's No. 1.....per dos. $0 00
Wensleman's No. 2..... " 9 00

HINGES.

Blind.
Clark's Gravity ... per dos. sets, 95c
Parker's.....65%
Shepherd's Noiseless, for Wood Casing.....per dos $1 05
Gate.
Clark's..... 1 2 3
Hgs & Ltch. . dos. $2.50 2.00 4.00
Hinges only... " 1.90 2.20
Latches only . " .70 .75
Knuckle.....per dos prs. $6 00
Leed's..... " sets 6 75
Superior..... " prs. 9 50
Spring.
American.....20%
Chicago.....25&5%
Columbia Dbl. Acting....40&10&5%
Gem.....25%
Ideal Detachable.....per gro. $11
Matchless.....30%
New Idea.....per gro. $3 00
Oxford.....20%
Wrought Iron
New Lists .....
McKinney
Light Strap Hinges.....60%
Heavy Strap Hinges.....65%
Light T Hinges.....55%
Heavy T Hinges.....45%
Extra Heavy T Hinges.....60%
Screw Hook and Strap.
6 to 12 in.....per 100 lbs. $3 75
14 to 20 in..... " " 3 65
22 to 36 in..... " " 3 40
Screw Hook and Eye.
½ in.....per 100 lbs. $6 75
⅝ in..... " " 7 75
¾ in..... " " 9 75

HOES

Garden .....70&10%
Grub.
Extra.....70%
Hazel.....per dos. $5 00
Ladies' and Boys'.....75%
Mortar.....75&10%
Planter's Eye.....62½%
Weed.....75&15%

HOLLOW WARE—See Ware.

HOOKS.

And Eyes.
Brass.....50&10%
Iron.....65&10%
Awning.....per gro. $1 00
Belt.
Brown's.....70&5%
Jones'.....65&5%
Bench.
See Steps, Bench.

Box.

Inch	6	8	10	12
Per doz	$1.35	1.65	1.75	2.30

Humason & Beckley's . . per doz. $2 50
(See Goods, Bright Wire.)

Bush.
Common Axe Handle. per doz. $7 00

Chain.

Inch	¼&⅜	½	⅝	¾
Per 100	$7.60-8.10	9.75	11.50	13.00

Clothes Lines.
Japanned . . . . . per doz 22c@24c
Galvanized . . . . . " 40c

Coat and Hat
Cast Iron . . . . per gro. 72c@$1 50
Gem Wire 70%

Conductor.
Malleable 25%
Wrought 20%

Corn.
Common, unpolished, per doz. $1 50
Little Giant . . . . . " 3 25

Gate.
See Goods, Bright Wire.

Grass.

Common. Nos.	2	3	1
Per doz	$1.50	1.60	1.70

German . . . . . per doz. 1 75
Little Giant . . . . . " 2 75

Hammock.
With plate . . . . . per doz. 50
With screw . . . . . " 45

Lambrequin, or Drapery, per gro. 21c
Picture . . . . . 50% @50&10%
Potato and Manure . . . . . 70&12½%

Screw.
Brass . . . . . 80&5%
(See Goods, Bright Wire.)
Seat Spring . . . . . per lb. 5½c

HOOPS, TUB.

Hastle . . . per case of 2 doz $1 50

HOSE, GARDEN.

			Coupled, per ft.
Heron, 3 ply-¾" guar. press		55 lbs.	7½c
Crane, "	" "	75 "	8½c
Falcon "	" "	95 "	9½c
Eagle "	" "	120 "	10½c
Condor "	" "	150 "	11½c
High Test "	" "	200 "	12½c

COTTON COV. RUBBER HOSE.

High Grade-¾"-guar. press.		400 lbs.	11½
Special "	" "	300 "	9½c
Leader "	" "	100 "	7½c

HUSKERS.

Boss.

Nos	B	BB	E	200
Per doz	$2.00	3.00	1.75	.80

Nos	L	PP	P	K
Per gro	$5.40	6.00	6.00	10.50
Nos		2000	3000	O
Per gro		$3.50	9.00	24.50

Nos	00	50	64	68
Per doz	$2.15	2.15	.85	1.45

Brinkerhoff's.
Per gro $14 40

Clark's.

No	1	63	200	400
Per doz	$0.40	.75	.75	1.75
Nos	200a	40a	3c	4c
Per doz	$0.85	.50	1.25	1.25

Nos	A	AB	P
Per doz	$3.00	$4.25	$2.50

IRON.

See Metals.—First column.

IRONS.

Curling.
X . . . . . per doz. $0 40
Y . . . . . " 50
Z . . . . . " 58
Jewel . . . . . " 85
Imperial . . . . . " 1 00
Pinking . . . . . " 70
Plane.
Wood Bench . . . . . 20&5%
Sad.
Charcoal . . . . . per doz. $11 00
Common, polished, per 100 lb. 4 50
Common, nickel plated, 5 25
Chinese Polishing . . . . . per doz. 7 40
Laundry, No. 1 . . . . . " 5 75
Laundry, No. 2 . . . . . " 6 25
Mrs. Pott's,
No. 50 J, Enterprise, per set 93
No. 55 J, " " 90
No. 50 T, " " 1 00
No. 55 T, " " 90
Tailors' Sad . . . . . per lb. 5½
Tailors' Geese . . . . . " 4½
Tuyere.
Single Duck Nest . . . . . per doz $5 25
Double Duck Nest . . . . . " 6 25
Sutton . . . . . each 2 00

JACKS.

Locomotive 70%
Wagon.
Oliver,

Nos	0	00
Each	$0.60	$0.80

Standard.

Nos	1	2
Each	$0.60	1.00

Wilcox.

Nos	1	2	3
Each	$0.85	1.20	2.00

KETTLES.

Brass 15%
Cauldron . . . . . 40&5%
Copper . . . . . per lb., 37c
Maslin 65%
Sugar 30%

KNIVES.

Boot Topping.
Clyde, 9-in. Scimiter Blade, dos. $3 85
California 3 40
Cooper's Hoop 15%
Corn.
Clipper . . . . . per dos. $1 75
Disston's . . . . . " 2 75
Earle's . . . . . " 3 00
Woodford . . . . . " 3 25
Drawing.
Standard 70%
Adjustable 15%
Barton's Carpenters' 10%
Folding Handle . . . . . 25&5%
Hay.
American, Sickle Edge . . . dos. $10 50
Canton, Sickle Edge . . . . . " 8 25
Heath's . . . . . " 5 00
Iwan's, Sickle Edge . . . . . " 9 50
Iwan's, Impv'd Serrated . " 10 00
Lightn'g, Holt's Genuine . " 6 50
Lightning Pattern . . . . . " 6 00
Wadsworth's Sp'r Point . . " 3 50
Hedge.
Challenge . . . . . per doz. $6 00
Disston's . . . . . " 3 75
Mincing.
Common, Single . . . . . " 40
Common, Double . . . . . " 50
Streeter, 4-Blade . . . . . " 1 30
Streeter, 6-Blade . . . . . " 2 00
Putty.
Common . . . . . per dos. $0 60@1 00
Lander's . . . . . " 1 40@1 75
Scraping.
Beech Handle . . . . . 75@1 00
Lander's . . . . . 5 25@6 00

KNOBS.

Door.
Mineral . . . . . per doz. $0 80
Porcelain . . . . . " 90
Jet . . . . . " 90

LADDERS.

Common Long.
Per ft . . . . . 9c@14c
Extension.
Per ft 14c
Step.
Common, per ft 7½c
Common, with Shelf, add 10c.
Keystone 15c
Triumph, per ft 20c

LANTERNS.

Bull's Eye Police.
3 -in. Flash Light . . . . per doz. $6 00
2½-in. Regular . . . . . " 4 90
3 -in. Regular . . . . . " 5 50
Tubular.
Dietz & Hanes' . . . . . net prices.

LEADERS, CATTLE.

Nos	1	2	3
Per doz	$0 55	.70	2.75

LEATHER, LACE.

Cut 33⅓%
Sides.
Ex. Quality . . . . . per sq. ft., 27

LEATHERS, PUMP.

Valve and Plunger 10%

LIFTERS.

Stove Cover.
Coppered . . . . . per gro. 1 75@3 65
Ideal . . . . . " 5 50
Alaska, Coppered " 4 00
Alaska, Nickeled " 5 00
Transom.
Payson's 30%

LINES.

Chalk.
Twisted in 20-ft. hanks.

Nos	4	6	7	8	9
Gross	$1.50	2 00	2 25	2 50	3 00

Twisted in 50-ft. balls.

Nos	1	2	3	4
Per doz	25c	30c	35c	41c

Braided in 20-ft. hanks.

Nos	0	1	2	3
Per dos	22c	23c	31c	35c

Mansons', in 100-ft. hanks . . . dos. 90c
Clothes.
60-ft. Jute . . . . . per doz. $0 95
72-ft. Jute . . . . . " 1 15
60-ft. Sisal . . . . . " 1 40
72-ft. Sisal . . . . . " 2 15
90-ft. Cotton . . . . . " 1 15
40-ft. Braided Cotton . " 25

LINING, STOVE.

In Bricks . . . . . per crate, 42c

MACHINES.

Boring.	Without Augers	With Augers
Angular . . . . . per doz.	3 00	4 40
Upright . . . . . "	2 00	4 00

Leather Riveting.

Chicago, Pomeroy	per doz.	$9 00
Excelsior	"	2 00
Handy	"	2 00
Little Giant	"	3 00
Pony, Pomeroy	"	7 20

Washing.

Winner	per doz.	54 00
Keystone	"	54 00
U. S. Steel	"	60 00
Advance, f.o.b. Chicago	"	24 50

MAIL BOXES.

See Boxes.

MALLETS.

Carpenters'.

Fibre Head, Small . . .	per doz.	$5 00
" " Medium .	"	5 75
" " Large . . .	"	7 00
Round Hickory	"	2 25
" Lignumvitæ . . .	"	4 00
Square Hickory	"	2 25
" Lignumvitæ . . .	"	4 50

Tinners'.

Applewood	"	1 70
Hickory	"	1.00@1 50
Hickory Sheet Iron . . .	"	1 50

MATS

Door
National Rigid . . . . . 50, 10&5%
Acme Steel Flexible 33⅓%
Stove.
No. 2 . . . . . per gro. $3 25
No. 1 . . . . . " 3 50
No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle . . . . . per dos. 1 10
No. 2 Asbestos Toasters, with ring . . . . . per doz. 60

MATTOCKS.

Plumbs . . . . . 65&10%
Extra 60%

MAULS.

Iron, lbs	10	13	16	18
Per doz	$4.00	4.50	5.25	5.60

Wood face, lbs	10	12	14
Per dos	$5.00	5.50	6.00

Wood Choppers'.
Lake Super'r & Oregon Pat. 75&10%

MEASURES.

	½ pk.	1 pk.	bu.
Galvanized, per doz.	$2.25	3.00	3.85
Japanned . . "	1.75	2.45	3.15

MICA.

First Quality . . . . . 40&5%
Second Quality . . . . . 50&5%

MILLS, COFFEE.

Enterprise 25%
Parker . . . . . 40-12½&2½%
Arcade . . . . . 40-12½&2½%

MITRE BOXES.

See Boxes.

MOPS.

Erie . . . . . per doz. $3 15
Handled Cotton.

Pounds	½	1	1½	2
Per dozen	$2.00	2.35	2.65	3.35

MOWERS, LAWN.

Gladiator—B. B.				
Inches	16	18	20	
Each	6.50	7.25	8.00	
King Universal—B. B.				
Each	5.25	5.75	6 00	
Inches	14	16	18	
Big Giant	2.50	2.90	4.25	
Little Giant	2.50	2.65	2.75	

Philadelphia.
All Styles, except A & E, 60, 10&10%
Style A . . . . . 50&10%
Style E, High Wheel . . . . 60, 10&10%
Drexels 40%
All Day . . . . . Net Price

NAILS.

Cut Steel . . . . . rates, $2 50
Cut Iron 2 00
Wire.
Small Lots $2 25
Carload Lots 2 15
Cement Coated 2 30
Horse Shoe.
Ausable . . . . . 55&5%
Capewell 15%
Perfect . . . . . 55&5%
Putnam . . . . . 20&5%
Star . . . . . 25&5%
Clover Leaf . . . . . per lb., net, 10½c
Picture.
Brass Heads 25%
Brads 85%
Furniture 15%

NAIL PULLERS.

See Pullers.

NAIL SETS.

See Sets.

NETTING, POULTRY.

Galvanized beforeweaving . . . 60,10&2½%
Galvanized after weaving . . . . 80&7½%
Cut Pieces . . . . . 65&5%

NIPPERS.

End Cutting.

Stubb's Pattern. Inches	6½	6
Per dozen	$4.00	4.25

End and Diagonal Cutting.
Swedish Side 75%
Utica Drop Forge & Tool Co 60%
Hoof.
Heller's . . . . . 80&10%
V. & B . . . . . 55&5%

NOZZLES.

Hose.
Genuine Gem . . . . . per doz. $3 90
Magic . . . . . " 3 00
Mystic . . . . . " 3 00

NUTS, HOT PRESSED.

Square Blank.

In	¼	⅜	½	⅝	¾	⅞
lb	9c	8c	9c	8c	8c	8c

Square Tapped.

In.	¼	⅜	½	⅝	¾	⅞
lb.	12c	10c	8c	7c	6c	6c

For 5-lb. boxes add ½c per lb. to above prices.

OILERS.

Chase Pattern.
Brass and Copper 60%
Zinc 60%
Engineers'.
Cannon 55%
Tin . . . . . per dos. $2 00@2 25
Machine.
Common . . . . . per doz. $0 58
Copper Plated Steel . . " 1 00
Malleable Iron . . . . . 60, 10&5%
Japanned . . . . . 65@75c

OPENERS.

Box.

Inches	10	12	14
Flat . . . . . per dos.	$2.85	3.00	4.15
Round . . . . "	2.10	2.25	2.75

Can.
Delmonico . . . . . per doz $1 20
Never Slip . . . . . " 65
Crate.
V. & B . . . . . " 5 75

OUTFITS, COBBLING.

Combination . . . . . per doz. 11 00
Economy . . . . . " 8 25
Family . . . . . " 5 75

PADLOCKS.

Standard Wrought . . . . . 75&5%
Champion 50%
Eureka . . . . . 60, 10&5%
Yale . . . . . 60&5%

PAILS.

Cream.
14-qt., without gauge, per doz. $2 50
20-qt., " " 3 00
20-qt., with gauge . . . . " 3 50
Sap.
10-qt., Galvanized, per 100 . . . $13 00
12-qt., " " 14 50
14-qt., " " 16 25
16-qt., " " 17 75
10-qt., IC Tin . . . . " 10 25
12-qt., " " 11 75
14-qt., " " 13 00
10-qt., IX Tin . . . . " 12 75
12-qt., " " 16 00
14-qt., " " 47 00
Stock.

Galv'd. qts.	14	16	18	20
Per doz	$3.75	4.00	4.75	5.25

Water.

Galvanized . . . qts.	10	12	14
Per doz	$1.95	2.20	2.45

Wood.
Cable, 2-Hoop . . . . . per doz. $1 70
Cable, 3-Hoop . . . . . " 1 90
Cedar, 3-Hoop . . . . . " 2 95
Standard, 2-Hoop . . . . " 1 60
Standard, 3-Hoop . . . . " 1 80

PANS

Dripping . . . . . 30&5%
Fry
Common . . . . . 75&10%
Acme 70%
Roasting.
Paxton,

Nos	1	2	3	4
Per doz	$4.75	5.75	6.50	7.50

Neverburn . . 4.00 4.50 .50 6.00
Savory, No. 200 . . . . . per dos. $8.00

PAPER.

Building.

Plain	per 100 lbs.	$1 25
Tarred	"	1 35
Tarred Felt	"	1 65
No. 20, Red Rosin . . .	per roll,	40
No. 30, Red Rosin . . .	"	55

Sand and Emery.
Star . . . . . low list, 50%
B. & A 50%
Wrapping.
Dead Fiber . . . . . per lb. $0 06
Manila . . . . . " 6 00

PARERS.

Apple
Bay State.....per doz. $13 00
Turntable..... " 0 00
White Mountain..... " 5 00
Reading..... " 7 00
Potato.
Goodsell's Saratoga, 10½ in., doz. 6 50
Goodsell's Saratoga, 5 in., doz. 5 50

PICKS.

Adze Eye Ore.....70%
Drifting and Poll Picks.....70%
Plumbs, Railroad.....70%
Surface.....70%

PINCERS.

Carpenters', cast steel.
Inches..... 6 8 10 12
Per doz..... $2.00 2.50 2.95 3.75
Blacksmiths'.....45%
Heller's.....40%

PINS.

Clothes.
Common.....per box of 5 gro $0 32
Hoyt's..... " " 31
U. S..... " " 70
Picket.
Fluted, 15-in.....per doz. $0 70
Fluted, 21-in..... " 1 60
Spiral..... " 1 90

PIPE.

Conductor.

	Gal. Steel	Charcoal
L. C. L. to Dealers:—		
Eastern	70&10%	50&10&2½%
Pittsburgh	75&10&5%	60%
Central	75&10%	60%
Northwestern	75&7½%	60%
Western	70&12½%	50&12½%
Tennessee	70&10%	50&12½%
Southern	70%	50&12½%
Southwestern	70%	50&5%

Terms 60 days; 2% Cash 10 days.
Factory shipments generally delivered.

Lead.
Full coils.....per lb. 7½c
Cut coils..... " 7½c
Stove

Acme—Inches	5	6	7
Smooth, per jt	8½c	9½c	10½c
Planished, "	22 c	33 c	43 c
Peerless—Smooth,	7½c	8 c	9½c
Polished	14½c	15½c	18 c
Planished	28 c	31 c	35½c
Made-up—Inches	5	6	7
Smooth	7½c	8 c	9½c

7-to 6 in. Smooth Tapers, pr jt...13c
6 in. Smooth T's..... " 27c
7 to 6 in. Planished Tapers.....45c
Yale Patent Lock Pipe—Stove.

	5'	6'	7'	7' to 6'
Blue Steel:	Cents			
Battle Axe Blue	7	7½	9½	10½
Can't Slip "	7½	8½	10	11
Peerless "	7½	8½	10	11
Duplex "	10	11	13	14
Yale, Rus. Fin	15	16	17	18
Duplex Planished	29	31	37	38
Galvano, Gal	15	16	17	18

If wanted made up, add per joint or grooved, 1c; riveted, 1½c. Grating made-up pipe extra.
Wrought Iron Gas Pipe.
⅛@¼-in., black.....discount, 60%
⅛@¼-in., black..... " 60,10&5%
⅜-in. to 6-in., black... " 70%
7-in. to 12-in., black... " 62½%
⅛@¼-in., galvanized.... " 42%
⅛@¼-in., galvanized.... " 50%
⅜-in. to 6-in., galvan'd " 57½%
7-in. to 12-in., galvan'd " 45%

PLANES.

Sargent Iron Bench.....60%
Stanley Iron Bench.....25&5%

PLATES, TIN.

See Metals in Column I.

PLIERS.

Button's—Ins. 4½ 6 8 10
Per doz..... $2.75 3.35 4.15 5.15
Button's Pattern.
Inches..... 4½ 6 8 10
Per doz..... $2.25 2.75 3.25 4.25
Cutting.
Bernard's.....30%
Lodi.....50%
End and Diagonal Cutting
Swedish Side.....70%
Utica Drop Forge & Tool Co....50%
Fencing.
Farmers' Choice.....per doz. $8 00
Russell's..... " 5 25
Flat and Round Nose.
Bernard's.....30%
German.....65%
Lodi.....50%
Paragon.....50%
Gas—Inches.. 7 8 10 12
..... $3.00 3.50 4.50 5.50
Tinners'.
Hollow.....40%
Solid.....each, 5½c

PLUMBS AND LEVELS

Common.....60&10&10%
Cook's.....40%
Davis' Iron.....25%
Davis' Inclinometer.....15%

POINTS

Drive Well Points.....75&5%

POKERS, STOVE.

Wr't Steel, str't or bent, per doz. $0 55
Wr't Steel, wood hand'l " 80
Nickel Plated, coil hand'l " 65

POKES, ANIMAL.

Cracker Jack, wr't steel, per doz. $4 50

POLISH.

Metal.
A-B Oil Metal Polish, 4-oz. bottles, 3 doz. case, per gr. $9 00
1-gal. can..... 90
White Silk, half pints, per doz, $2 00
White Silk, 6-oz. cans, per doz. 1 00
Shoe.
M. C. D.....per doz.....30c@50c
F. C. O..... " 40c
T M..... " .55c@$1 75
Imperial.....per gro 5 00
Stove.
A-B Polishes.
Liquid Stove Polish.
3 doz. in case..... $2 25
6 " " .....gr., 9 00
Fireproof Stove Polish, 3 and 6 doz. in case.....gr., 12 00
Liquid Waterproof Stove Polish, 10-oz. cans, per gro., 12 00
Oil Paste Polish.
6-oz. cans, 3 doz. case..... 2 25
1-lb. " 3 " " 3 75
5-lb. " per can..... 50
Dry Powdered Stove Polish.
5-lb. box..... 75
100-lb. bbls.....per lb. 12
Powder Polish. 3 doz. 6 do. 12 doz.
$2.25 $4.50 $9 00
Water Paste Stove Polish, ½-lb. boxes, 3 doz. case..per gro., 12 00
Black Eagle, 1-lb. cans, pr gr, $15 00
Black Silk—
5-lb. pail..... $0 70
Paste, 5-oz. cans....per doz. 75
Paste, ½-lb. cans.... " 1 05
Liquid, ½-pt. cans... " 1 05
Liquid, 6-oz. cans... " 75
Black Jack, ½-lb. cans. " 9 25
Dixon's Carb. of Iron. " 5 75
Nickel Plate..... " 4 50

POPPERS, CORN.

Round or Square, 1-qt. per doz. $1 05
Square, 1½-qt..... " 1 15
Square, 2-qt..... " 1 30
4-qt..... " 3 75

POTS, FIRE.

Clayton & Lambert's, each, $4 75@6 25
Gate City.....each, 6 25
Gem.....each, $6 75@8 50

POWDER.

See Ammunition.

PRESSES, FRUIT AND JELLY.

Enterprise Manufacturing Co.....25%

PRIMERS

See Ammunition.

PRUNERS.

Disston's Pole.....per doz. $6 50
Henry's Improved..... " 75&10%
Water's Improved..... " 80%

PULLERS.

Cork.
Daisy..... each, $3 10
Phœnix..... " 1 40
Quick and Easy..... " 2 70
Nail.
Giant.....per doz. 10 50
Giant Pattern..... " 6 00
Jumbo..... " 9 00
Tack—Giant..... " 40

PULLEYS.

Awning—Jap'd.....60%
Clothes Line.....50&10%
Hay Fork.
Iron Wheel, 5-in.....per doz. $1 75
Wood Wheel, 6-in.... " 1 75
Wood Wheel, 8-in., pass knot, ...per doz. 2 15
Hot House—Jap'd.....50&10%
Screw—Jap'd.....60%
Side—Jap'd.....50&10%
Sash.
Common.....per doz. $0 20
Common-Sense, 2-in.. " 20
Empire Pattern, 2-in.. " 20
Ideal..... " 20
Steel..... " 25

PUMPS.

Pitcher Spout.
Nos..... 1 2 3 4
Each..... $1.00 1.15 1.30 1 70
Spray.
Blizzard.....per doz. $14 50
Cyclone, tin..... " 3 40
Cyclone, copper..... " 6 75
Daisy..... " 9 00
Little Giant.....each,... 3 25

PUNCHES.

Conductors'.
No 22.....per doz $2 25
Machine.....per lb 19
Saddlers'.
Common .....per doz 60c@70c
Good..... " 72c@84c

PUTTY.

In Bladders.
Strictly pure.....per 100 lbs. 2 35

RAIL.

Barn Door.
Matchless, 1-in..... 9 c
Matchless, 1¼-in..... 8½c
Storm King..... 4 c
Sliding Door.
Painted steel.....per ft. 4½c
Bronzed wrought iron...per ft. 8½c

RAKES.

Coal or Wood.....per doz. $5 20
Garden.
Steel.....70%
Steel, bow.....70%
Malleable iron, heavy.....60&10%
Hay.
Wood.....$1 50@$2 00
Lawn—Wood.
XXX.....per doz. $3 00
Automatic..... " 5 25
Lawn Queen..... " 2 75
Jumbo, 36 teeth..... " 5 25

RASPS—See Files.

RAZORS.

Bo-ras-ic.....50%
Red Devil.....50%
Tree Brand.....50%

REGISTERS.

List December 5, 1904.

Black and White Japanned, Reg. and Border.....70%
On Face.....75&10%

RINGS.

Bull.

	Per doz	⅜in.	⅝in.
Copper	2½ in.		
	$1 10	$1 40	
Rea's Improved Self-Piercing copper, pr doz	2 00	....	
Steel, per doz	85	95	
Nickel plated	1 35	....	

and Ringers—Hog.
Blair's Rings.....per doz. $0 55
Blair's Ringers..... " 75
Brown's Rings..... " 50
Brown's Ringers..... " 70
Champion Ringers.... " 1 60
Hill's Ringers..... " 70
Hill's Ring, boxes.... " 47
Major Rings..... " 60
Perfect Ringers..... " 95
Wolverine Rings..... " 1 40
Wolverine Ringers.... " 80
Fruit Jar.
White.....per lb.....30c
Key.
Split, round.....per doz. $0 17
Split, square..... " 33
Ball, round..... " 33

RIVETS.

and Burrs.
Copper Belt.....40%
Coppered Iron.....60&10&5%
Tinners'.....60&10%
Hame.....per lb. $0 10
Slotted Clinch per doz 40c@45c
Tubular
Nos 1 and 2 assorted sizes, doz, 45c

RIVET SETS

See Sets.

ROPE.

Cotton.
¼, 5-16 in. Com on reels. .per lb. 11½c
¼, 5-16 in Com. in coils.. " 12 c
¼, 5-16 Imperial in coils.. " 21 c
Sisal.
1st Quality.....12 c
Hardware Grade, rates, per lb...10 c
Pure Manila.
1st quality.....per lb. 15½c
Hardware Grade, rates... " 14½c

RULES.

Boxwood.....60&10%
Ivory.....

SASH WEIGHTS.

See Weights.

SAWS.

Back.
Disston's.....35%
Jackson's.....35%
Butchers'.
Disston's.....30%
Circular.
Disston's.....50%
Hiles'.....50&10%
Compass.
Common.....per doz $1 35@1 60
Disston's .....%25
Cross-Cut
Disston's.....45%
Dehorning.
Disston's.....per doz. $6 75
Hack.
Disston's.....25%
Keystone.....30%
Hand and Rip.
Brown's.....30%
Disston's No. 7.....30%
Disston's Nos. 8, D8, 12, 76, 112, D100, and 120 (new list).....35%
Keystone.....30%
Enterprize, hand.....per doz. $5 00
Our Saw, hand..... " 4 00
Our Saw, rip..... " 4 50
Keyhole—Disston's.....25%
Kitchen.
Sterling 25%
One Man.....50%
Panel
Brown's 30%
Disston's No. 7.....30%
Disston's No. D100.....25%
Pruning.
Brown's 25%
Disston's 25%
Wood
Common.....per doz. $4 50
Clover Leaf..... " 6 00

SAW BUCKS—See Bucks.

SAW SETS—See Sets.

SAW TOOLS—See Tools.

AW FRAMES.

Common, plain.....per doz. $1 35
Common, painted..... " 1 70

SCALES.

Counter.
Pelouze.....60&10%
Platform.
Osgood.....50%

SCOOPS.

Grain.
½-bu. "Hercules".....per doz. 13 75
1-bu. "Hercules"..... " 15 00

SCRAPERS.

Box.
Triangular.....per doz. $4 00
Cabinet.
Cast Steel . . . per doz , 60c@75c
Road.

	Cubic ft. 7	5	3
Without run's, ea.	$4.00	3.75	3.50
With runners, ea..	4.25	4.00	3.75

SCREWS.

Bench.

Iron, in	1	1½	1¾
	$3.50	4.00	4.75

Wood, white maple...per doz. $3 50
Hand—Wood.....10%
Hand Rail.....20&10%
Jack.....70&10&5%
Lag or Coach—all sizes, gimlet pointed.....75&5%
Saw—Centennial

Nos..	1	2	3	4	5	6
Per doz.	18c	20c	26c	30c	23c	25c

Wood.
F. H. Bright.....87½&5%
R. H Blued.....85%
F. H. Jap'd.....82½%
F. H. Brass.....85%
R. H. Brass.....80%
R. H. Nickel Plated.....75-10%

SCYTHES.

Be Ve Be, grass.....per doz. $6 50
Clipper, grass..... " 3 00
Clover Leaf Dutchman. " 3 00
Honest Dutchman..... " 5 00
Be Ve Be..... " 4 00

VISES.

Phœnix.....30%
Phœnix Oval Slide.
Inches..... 2½ 3 3½ 4½
Each..... $1.25 1.50 1.85 2.75
Parker's Parallel.....18&20%
Parker's Victor.....15%
Parker's Combination.....75%
Solid Box.....40&5%
Adams' Mechanics'.....each 2 50
Williamson's Universal.....60%

WARE.

Stove Hollow Ware.
Plain or Unground.....50%
Ground Ware.....45%
Enameled Ware.....33⅓%
Country Hollow Ware, per 100 lbs. $3 00
White Enameled Ware.
Maslin Kettles.....60&10%
Covered Ware.
Tin'd and Turn'd.....35&10%
Enameled.....45&10%
Glue Pots.
Tinned.....25%
Enameled.....30%
Enameled.
Cherry Blossom and Chrysolite..50%

WASH BOARDS—See Boards.

WASHERS.

Standard O G. cast iron . . . per lb. 2½c
Wrought iron in bulk, per lb.:
In. ⅛ ¼ ⅜ ½ ⅝ ¾ 1
9c 6½c 5c 4½c 4¼c 4¼c 3½c
Wrought steel in 5-lb. boxes, per lb.:
In. ⅛ ¼ ⅜ ½ ⅝ ¾ 1
10c 7c 6c 5½c 5c 5c 4½c

WASHING MACHINES—See Machines.

WEDGES.

Ax.....per doz. $0 30
Galling.....per lb. 10¢
Saw..... " 8¢

WEANERS.

Calf.
Fuller's, per doz.....$2 00 to $2 50
Tyler's Safety, per doz 1 85 to 2 40
Carroll's, per doz..... 3 00 to 3 75
Standard, per doz..... 3 00
Hoosier, per doz..... 3 50 to 4 00

WEIGHTS.

Hitching.....per lb. 2½c
Sash—f.o.b. Chicago....pr ton, 20 50

WHEEL BARROWS.

Common Railroad.....per doz. $17 00
Heavy Railroad..... " 24 00
Panama Steel Tray.... " 30 00
Klondike Steel Tray.. " 28 00

WHEEL BARROWS.

Common Railroad.....per doz. $17 00
Heavy Railroad..... " 24 00
Panama Steel Tray.... " 30 00
Klondike Steel Tray.. " 28 00

WHEELS.

Corundum.....70&10&5%
Emery.....75&5%
Well. Inches.. 8 10 12 14
Per doz..... $2.40 3.25 4.00 6.00

WIRE.

	Painted.	Galv'd
Barbed.		
Carloads . . per 100 lbs.	$2.33	$2.63
Less than car "	2.43	2.73
Brass.		
In coils		20%
In 1-lb. spools, new list		50%
Broom—Tinned . . .		60&10&10&10%
Cable—Same price as Barbed Wire.		
Copper.		
In coils		20&10%33⅓%
1-lb. spools, new list		50&10%
Fence—Smooth.		
Nos. 6 to 9, An'eal'd, pr 100 lbs.		$2 20
Nos. 6 to 9, Galv'd.. "		2 60
Hair—New List		60%
Market.		
Bright, full bdles		70&5%
Bright, broken bdles		70%
Coppered, full bdles		70%
Coppered, broken bdles		65&10%
Tinned, full bdles		75&5%
Tinned, broken bdles		65&10%
Picture—In coils		80%@80&10%
In 5-lb. spools	per lb	26c
Plain—Small lots		$3 10
Car lots		2 95
Small spools 5c per 100 higher.		

WRENCHES.

Acme Standard.....60%
Alligator No. 1.....55cnet
Always Ready.....50%
Coe's Standard.....40&10&5%
Agricultural.....75&5%
Ellis Adjustable.....25%
Malleable "S".....per lb. 08c
Malleable..... " 08c
Stillson Pipe.....70%

WRINGERS.

No. 22, Guarantee....per doz, $32 50
No. 110, Guarantee.... " 32 50
No. 110, Brighton..... " 23 50
No. 113, Bicycle..... " 31 50
No. 530, Royal..... " 32 50
No. 250, Universal..... " 28 00
No. 300, Novelty..... " 28 00
No. 310, Keystone..... " 28 00
No. 100, Rival..... " 23 50

Tinned Carpet.....90&10%
Gimp.....90&10%
Upholsters' Cut.....90&20%
Upholsters' Wire.....90&10%
Double Pointed.....90%
Copper.....per lb. 32c
Canvas Nails.....75&5%
Clout Nails.....75&10%
Hungarian Nails.....80%

TAPES, MEASURING.

Asses' Skin.....40&10%
Bend Leather.....20%
Patent Leather.....20%
Lufkin's Steel.....25%
Lufkin's Metallic.....30%

TEE BEVELS—See Bevels.

THERMOMETERS.

Tin Case.....per doz. 80c@$1 25
Wood Back..... " $2.00@12 00
Glass..... " 12 00

TIES.

Bale.
Single Loop.....80&5%
All other kinds.....70%
Cow—See "Chains."

TOOLS, SAW.

Disston's Universal.....40%
Miniature.
Smith & Hemenway.....25%

TRAPS.

Fly.
Ballon.....per doz. $1 25
Harper's..... " 1 35
Game.
Newhouse.....40&10%
New Victor.....70&10%
Mole.
Reddick's.....per doz. $6 00
Mouse and Rat.
Wood Choker ..per doz. holes $0 13
Tin Choker..... " " 75
Delusion.....per doz. 1 15
Marty Rat..... " 6 25
Marty Rat Imitation. " 3 50
Marty Mouse..... " 3 00
Marty Mouse Imitation " 2 00
Hold-em, wire rat.... " 3 75

TROWELS.

Brick.
Clover Leaf.....30%
Brade's.....15&5%
Disston's.....30%
Rose's.....20%
Plasterers'.
Clover Leaf.....40%
Disston's.....25%
W. & McP.....25%

TRUCKS.

Bag.....each, $2 75
Handy..... " 1 85
Warehouse.....50&10%

No.	1	2	3
Half Ironed	$3.00	3.85	5.50
Full Ironed	3.45	4.50	6.45

TUBS, WASH

Standard, Wood				Ex.
Nos.	0	2	1	large
Per doz.	$5.00	6.00	7.00	9.50
Dowell.				
Per doz.	5.35	6.35	7.00	9.50
Cedar.				
Per doz.	6.10	7.10	7.00	10.80
Indurated.				
Per doz.	8.55	9.45	10.80	13.50
Galvanized.				
No.	1	2	3	
Per doz.	$6.00	6.75	7.75	

TWINE.

	Per lb.
3-ply Cotton Wrapping	25c
4 " " "	25c
" " Extra Wrapping	27c
4 " " Hvy. Wrapping	25c
4 " " Wrapping on tubes	27c
3 " " " cones	25c
4 " " " " "	25c
India Hemp, ¼-lb. balls	19c
" " ½-lb. "	18c
" " ¼-lb. "	doz. 75c
2-ply Jute, ¼-lb. "	14c
3-ply Jute, ¼-lb. "	13c
Jute Wrapping, ¼-lb. balls	14c
Jute Wool, 1-lb. balls	9½c

Seine.

Nos.	9	12	15
Soft.....per lb	26½	26	25
Med..... "	26½	26	25
Hard..... "	27	26½	26

Staging, ¼-lb. ball, size 21.....26½c
" " " " 24.....26c
" " " " 27.....26c
Bagging " " 23c
3-p y "B" in hanks 18c
4 " "B" " 18c
3 " "A" " 27c
3 " Silver Finish, in hanks...37c
Fodder or Lath.
130 strand.....6½c
200 strand.....—c

Reliance.
Per doz . . . light, $1.25; heavy, $2 50
Star.
Per doz . . . light, 90c; heavy, $1 25
Torrey's.....per doz. $1 35
Warner's No..... 11 13
Per doz..... 75c $1 35

SQUARES.

Steel and Iron.....70&10%
(Add for bluing, $2.50 per doz., net.)
Mitre.
Try.
Try and Bevel.
Try and Miter.
Fox's.....per doz. $5 75
Winterbottom's.....70%

SQUEEZERS, LEMON.

Common Wood.....per doz. $0 70
Porcelain Lined, Wood.. " 1 25
Boss, malleable iron.... " 1 20
Iron Frame, porc'n bowl " 1 90
Iron Frame, glass bowl , " 2 35
Little Giant, tin'd iron . " 4 00
Drum, japanned..... " 3 60
Drum, nickel plated ... " 4 50

STAPLES

Blind.
Barbed.....per lb . . .9½@9½c
Butter Tub..... " .....8 @8½c
Fence—less than carload.
Polished.....per 100 lbs. $2 30
Galvanized..... " 2 60
Netting.
Galvanized.....per 100 lbs. 4 00
Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples.....80-10&10%
Extra heavy.....75&10%

STEELYARD.

Discount 25%.

STONES.

Axe.
Hindostan.....per lb 5½@7 c
More Grit..... " 9½c
Washita..... " 17 c
Emery.....60%@60&5%
Oil—Mounted.
Arkansas Hard.....per doz.$23 00
Arkansas Soft..... " 15 50
Hindostan.....per lb 6½@6½
Oil—Unmounted.
Arkansas Hard.....per lb $2 05
Arkansas Soft ..... " 1 10
Lily White..... " 45
Queer Creek..... " 15
Ouachita..... " 38
Washita..... " 26
Scythe.
Black Diamond.....per gro. $8 00
Crescent..... " 4 25
Gem Corundum..... " 7 50
Green Mountain..... " 4 50
La Moille ..... " 7 00
Quinnebog..... " 5 00
Red End ..... " 3 75

STOPS, BENCH.

Hotchkiss'.....per doz. $3 50
Stearns'..... " 4 75

STOPPERS, FLUE.

Common.....per doz. $0 40
Crown..... " 45
Gem, flat, painted..... " 85
Gem, cor'd, decorated... " 70
Kirch's..... " 90
Perfect..... " 70@85
Skinner's Common Sense " 80

STOVE PIPE—See Pipe.

STOVE BOARDS—See Boards

STOVE POLISH—See Polish.

STRAPS.

Scoop.....per doz prs., $1 85
Skate..... " " 60@70c

STRETCHERS.

Carpet.
Bullard's.....per doz. $3 90
Excelsior..... " 5 25
Malleable Iron..... " 70
Perfection..... " 6 30
King..... " 4 50
Wire.
N. S. Elwood's.....per doz. $6 00
O. S. Elwood's..... " 6 00
Little Giant..... " 5 75
Safety..... " 10 00
Star Lever..... " 6 25
Canton Tackle Block. " 9 50
Warner's ..... " 6 25

SWIVELS.

Malleable Iron.....per lb. $0 70
Wrought Steel.....per gro. 4 50

TACKS.

American Cut.....90&15%
American Wire.....85&20%
Bill Posters Cut.....90&20%
Blued Carpet.....90&10%

SHAVING SETS.

Smith & Hemenway.....60%

SETS.

Vail.
Round, common.....per doz. $0 33
Square, common..... " 42
Octagon, common.... " 33
No. 5, square..... " 75
Cup point, knurled... " 75
Vivet.
Farmers'.....per doz. $1 20
Tinners'.....50&10%
Saw.
Aiken's Pattern.....per doz. $3 50
Common Lever..... " 1 20
Disston's Monarch.... " 6 50
Disston's X Cut ..... " 12 00
German..... " 1 05
Morrill's Old Style.... " 5 00
Morrill's Pattern..... " 3 25
Leach's..... " 80
Nash's Hand..... " 3 15
Nash's X Cut..... " 4 20
Stillman's Lever..... " 1 30
Stillman's X Cut..... " 2 50

SHARPENERS, SKATE.

Diamond..... per doz $1 60
Smith & Hemenway.....20%

SHAVES, SPOKE

Iron.....per doz $1 10@1 85
Wood ..... " 2 75@4 75
Bailey's .....50&5%
Goodell's 15%

SHEARS

Pruning
Buckeye, No. 1.....per doz $5 75
Buckeye, No. 2..... " 7 40
California Pat., 9-in.. " 3 20
California Pat., 10-in.. " 4 00
Draw Cut, No. 3..... " 13 75
Draw Cut, No. 4..... " 16 50
Henry's Pat. 0 01 14 012
Per doz.....$1.40 2.10 2.90 2.80
Star.....per doz $4 00
Sheep—No BBA.
Inches..... 6 6½ 7
Reg. Grip.....$11.25 11.50 12.00
Nar. Grip.,doz.... 11.00 11.25 12.25
Tinners'—See Snips.

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Common.
Inches..... 3 4 5
Per set..... $0.34 .42 .70
Hatfield's.
Per set..... $0.75 1.00 1.60

SHELLS—See Ammunition.

SHELLERS, CORN.

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SHIELDS.

Expansion Bolt Shields.....50&10%

SHOES.

Conductor.....60&10%

SHOE POLISH—See Polish.

SHOT—See Ammunition.

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No. 132..... " 6 00
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Per doz.
Neverbreak, hollow bck, blk. $15 75
National.... " " " 14 75
Buckeye.... " " " 10 00
Mohawk.... " " " 9 00
Drain.
Iwan's Perfection.....50%
Railroad, etc.
Black Diamond.....per doz. $1 50
Crescent..... " 5 75
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D Handle.....per doz. $3 50
Long Handle..... " 3 00

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Wrought Steel.
Painted, new list.....40-10&5%

SLEDGES—See Hammers.

SNAPS, HARNESS.

Champion.....33⅓%
German Pattern.....30&5%
Judd's Pattern.....50%

SNATHS.

Double Ring, Bush.....per doz. $6 00
Patent Loop, Bush..... " 5 75
Patent Loop, Grass..... " 5 50

SNIPS, TINNERS'.

Clover Leaf.....40&10%
National.....40&10%

SOLDER—See Metals.

SPRINGS, DOOR.

Perfect.
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Per doz.....30c 35c 40c 54c

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Ohio Stove Co., Portsmouth, O
Paxton & Gallagher, Omaha, Neb
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Lufkin Rule Co., Saginaw, Mich
Niagara Machine & Tool Works, Buffalo, N. Y
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Smith & Hemenway Co., New York N. Y
Wagner, C. DeWitt, Cedar Rapids, Ia
Weiss & Co., H., New York, N. Y

Tinplate
American Sheet & Tin Plate Co., Pittsburg, Pa
Eller Mfg. Co. Canton, O
Follansbee Bros. Co., Pittsburgh, Pa
Merchant & Evans Co., Philadelphia, Pa
Wheeling Corrugating Co., Wheeling, W. Va

Tinware Trimmings
Berger Bros. Co., Philadelphia, Pa

Tools, Etc.
North Bros. Mfg. Co., Philadelphia, Pa

Tools—See Carpenters' Tools

Tools—Linemen's
Smith & Hemenway, New York, N. Y

Trowels
Avery Stamping Co., Cleveland, O
Disston, H. & Sons, Inc., Philadelphia, Pa
Griffin Mfg. Co., Erie, Pa

Tubing—Brass and Copper
Hungerford, U. T., Brass & Copper Co. New York, N. Y

Tubing—Heavy Tin
Dieckmann, Ferdinand, Cincinnati, O

Ventilators
Badger Steel Roofing & Corrugating Co., La Crosse, Wis
Berger Mfg. Co., Canton, Ohio
Canton Art Metal Co., Canton, O
Canton Mfg. Co., Canton, O
Eller Mfg. Co., Canton, O
Friedley & Voshardt, Chicago Ill
Globe Ventilator Co., Troy, N. Y
Herrin Co., J. M., Warsaw, Ind
Iwan Mfg. Co., Streator Ill
Merchant & Evans Co., Philadelphia, Pa
Pullman Mfg. Co., Rochester, N. Y
Uno Ventilator Co., Lynn, Mass

Washers
Columbus Bolt Works., Columbus, O

Washing Machines
Brommer, H. F., Mfg. Co., Davenport, Ia
White Lily Mfg. Co., Davenport, Ia

Wire
American Steel & Wire Co., Chicago Ill

Wire Goods
Denning Wire & Fence Co., Cedar Rapids, Ia
Pittsburgh Steel Co., Pittsburgh, Pa

Wire Stretchers
Smith & Co., C. F. De Kalb, Ill

Wants and Sales

For Paid Yearly subscribers THE AMERICAN ARTISAN will insert under this head advertisements of six lines WITHOUT CHARGE for employers wishing to secure employes, persons seeking situations, parties desiring to purchase a business, businesses for sale, partners wanted, to exchange, etc. Those who respond to these announcements will please mention that they "READ THE ADVERTISEMENT IN THE AMERICAN ARTISAN."

BUSINESS CHANCES.

PATENTS HUBERT E. PECK 623 F. Street, N. W.
Washington, D. C. Consulting Expert in Patent Causes. U. S. and Foreign Patents. Send for leaflet on "Rejected Patent Applications."

For Sale—Good stock of hardware and tinshop. Will sell at invoice price. Must sell on account of poor health. A good chance for man with small capital. Address L-28, care THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-3t

For Sale or Trade—$8,000 hardware stock and fixtures. Store building, $6,000, small incumbrance on building. Good stock and good trade. Will take part in unincumbered farm land in southern Minnesota preferred. For particulars address Lock Box 315, Alden, Minnesota. 13-3t

For Sale—Well established hardware business and tinshop on the north side of Chicago. Clean stock. Will invoice about $7,500. Good reasons for selling. For full particulars address L-29, care THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-3t

For Sale—Well established hardware business in one of the most beautiful cities in Wisconsin of 6,000. Located in the finest farming community. A rare opportunity to get as clean a stock of goods and as good a location. Partnership dissolved and present owner wishes to retire on account of old age. Address L-26, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

For Sale—75c on the dollar will buy one of the finest stocks of General Hardware with Warren Fixtures, including Stoves, Paints, Oils, Glass, etc., in Northern Illinois. This stock will invoice about $10,000 and is a fine proposition for a Hardware Man and will stand close investigation. This city has a population of ten thousand inhabitants and is one of the most beautiful cities in the state for its size. This is a splendid business opportunity. No trade. Write for particulars. Address L-22, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. ufn

TINNER'S TOOLS.

Wanted—Second-hand wooden or light steel cornice brake eight feet long. State price. Address Messenger & Parks, Aurora, Illinois. 11-3t

HELP WANTED.

Wanted—For the Dakotas and Montana, an up-to-date furnace and boiler salesman. Address L-31, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-2t

Wanted—An experienced furnace and boiler salesman for Kansas and Oklahoma. Address L-32, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-2t

Wanted—Good furnace man and tinner. Steady job for the right man. Come at once. Address Washington Plumbing and Heating Co., Washington, Iowa. 13-3t

Wanted—All around tinner and furnace man. Mostly indoor work. Steady, sober man. Steady work the year around for the right man. Wages $2.75 or $3.00 per day of ten hours. Address Matern's Stove Store, 713 Water St., Sandusky, Ohio. 13-3t

Wanted—Up-to-date hardware clerk. Young, single man that can speak Scandinavian language preferred. Must be good salesman and understand general hardware, builders' supplies, ranges and sporting goods. State age, experience, salary wanted. Give references. Address McIntosh Hardware Co., Kalispel, Montana. 13-3t

Wanted—Steady job the year around for good man to do general work, such as tinning, plumbing, hot water and warm air heating, and all such work as comes to store in town of this kind. No booser or loafer needed. Good wages to the right man willing to take hold of the work. State wages and what you can do in first letter. Address Hicks & King, Manson, Iowa. 13-3t

Wanted—Good all around sober gunsmith. One who understands repairing guns, pistols, sewing machines and general repairing, pumps, etc. Address J. F. Edwards, Oxford, North Carolina. 13-3t

Wanted—First-class tinner for in and outside work. One capable of doing all kinds of work. Only good steady and reliable man need apply. Steady job year around to the right man. Address Peter Feller, Kaukauna, Wisconsin. 13-3t

Wanted—At once, good all around tinner and furnace man. One who can do plumbing. Steady position by the year. When answering state wages. Address Grebe Hardware and Harness Mfg. Co., Barrington, Illinois. 13-3t

Wanted—At once, tinner and clerk. Good steady job the year around. Good tools and plenty of work. Address Ebert Hardware Co., Truman, Minnesota. 13-3t

Wanted, At Once—Two first-class cornice makers. Address Messenger & Parks, Aurora, Illinois. 12-3t

Wanted—Tinner and furnace man at once. Address Hoernel Hardware Co., Racine, Wisconsin. 12-3t

Tinner Wanted—$3 per day of ten hours, with promise of more to a live, hustling tinner and furnace man. Good job and steady if you fill the bill. Address Charles Hahn, Mandan, North Dakota. 12-3t

Wanted At Once—First-class tinner, plumber and furnace man. Strictly sober and reliable. Good wages and steady job as long as wanted, if satisfactory. Located in the best fruit country on earth. Population of town about 1,200. Address The Curtis Hardware Co., Paonia, Colorado. 11-3t

Wanted—First-class plumber, steam fitter and tinner. One with not less than ten years' experience. Must be sober and reliable. To the right man we will guarantee a steady job and $85 per month. Address Arps Brothers Hardware Co., Ouray, Colorado. 11-3t

SITUATIONS WANTED.

Situation Wanted—By first-class tinner with twenty years' experience in hot air, furnace and general job work. Strictly temperate. Address L-27, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-2t

Situation Wanted—By young man as clerk in first-class retail hardware store. Six years' experience in retail hardware as clerk and helper. Best references furnished. Address D. H. Nichols, Mentone, Indiana. 13-1t

Position Wanted—By young man with twelve years' experience in retail hardware store as clerk or in a wholesale house. Have taken charge of $5,000 stock. Best of references. State wages. Address L-30, care THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-3t

Situation Wanted—At once, as clerk in hardware store. Competent to take full charge. Address L-25, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

Situation Wanted—By young man with eight years' experience in hardware store and tinshop. Wants position with some good furnace house or in retail hardware store as clerk. Address L-24, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

Position Wanted—By young man with seven years' experience in retail hardware as clerk. Speaks English and German. Can do bookkeeping and has had some experience in shop. Best of references. State wages. Address L-23, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

SPECIAL NOTICES.

WANTED SALESMAN

To sell a very low priced line of cannon and laundry stoves on a commission basis. Address Box 14, Station D, Cleveland, Ohio. 12-4t

SITUATION WANTED

By experienced hardware salesman. Either salary or commission. Well acquainted in Minnesota and Dakota. Address B-12, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 9-6t

SALESMEN WANTED

To carry a full line of Aluminum Baking Pans and Kitchen Ware, which are all good sellers. Must be able to give references. Address Standard Aluminum Co., Two Rivers, Wisconsin. 12-4t

FOR TRADE

320-acre farm, Sully County, South Dakota. First-class soil, all can be plowed, some improvements and fenced. Will trade for hardware or implements. Write at once. Address Dalton & Vaughn Land Co., Pierre, South Dakota. 12-2t

For Sale or Trade

In Oregon Real Estate

Oldest Hardware and Machinery stand. No stock. Brick building; best location. Only one competitor. In Southern Minnesota town. Address R. Reierson, 182 Morrison Portland, Oregon. 10-9t

Salesman Wanted

To sell high grade line of Stoves, Ranges and Heaters on commission, in the state of Indiana. For full information address S. E. I. W., 1917 Peach St., Erie, Pennsylvania. 10-4t

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FOR SALE: Hardware business. One of the oldest and most successful IN THE STATE OF NEBRASKA, in one of the largest and best cities within the richest and best farming district in the State. Competition good and business not overdone. Best location in the West for a good hustling party. It will pay you to investigate. Address G-7, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-4t

WANTED

High-class specialty salesmen in Central States to take as his most important attraction, a complete and condensed line of Tools and House Furnishing Goods, illustrated and quoted in compact and convenient manner. Liberal commission and a paying proposition to the right man. Address B-22, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-2t

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FOR SALE

Hardware Stock and Real Estate connected with same. Value real estate connected with business about $10,000. Stock and fixtures will invoice about $14,000. Can reduce stock. Sales $60,000 per annum. Located in best section of Iowa. Desire to sell at once. Address B-24 care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-ufn

SALESMAN WANTED

By a prominent Sheet Metal Works concern. First-class traveling salesman for Minnesota territory. Must be thoroughly experienced with the Sheet Metal line including steel ceilings and have an established reputation as to qualifications. References required. Address B-23, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-2t

Range Patterns For Sale

Metal patterns complete for high grade STEEL RANGE (three bodies) for sale at bargain. Address "Dexter," care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 10-12-14-16

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Wanted for next year, for the state of Wisconsin. Must be an up-to-date furnace. Commission basis only. Have sold furnaces on road for eighteen years. Can furnish bonds. Address "Furnace" care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 12-3t

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Furnace company wishes young man with experience to take charge of Chicago branch. State age, experience and give references. Address B-21, care of THE AMERICAN ARTISAN, 355 Dearborn St., Chicago. 13-2t

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Dries quickly with a handsome gloss and durable finish.
It looks better, goes farther and lasts longer than any Paint on the market.
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355 Dearborn Street, CHICAGO

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the "Proven Shield for Steel Work." Durability records in all climates; write for a few.

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These Two—
No. 670
Heavy Stove Plate Facing
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will give you clean, smooth castings with that dark-blue color you like to see. Let us send you a barrel of each on approval.
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Stove Pipe
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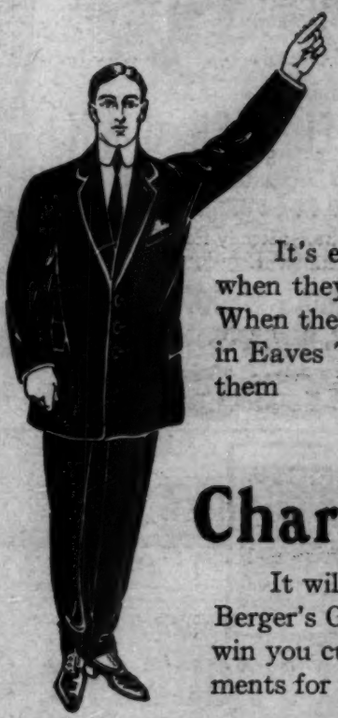
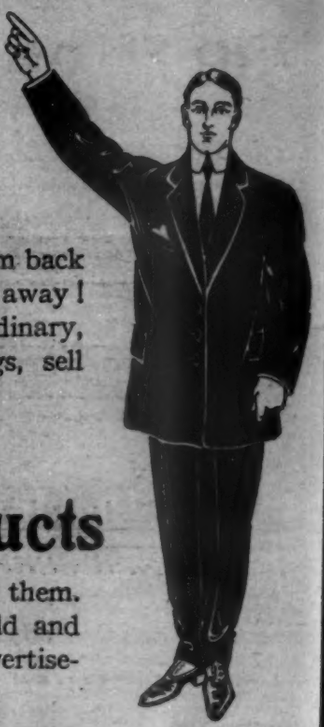
It pays to keep your customers satisfied





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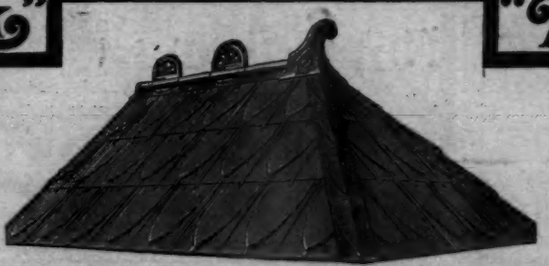

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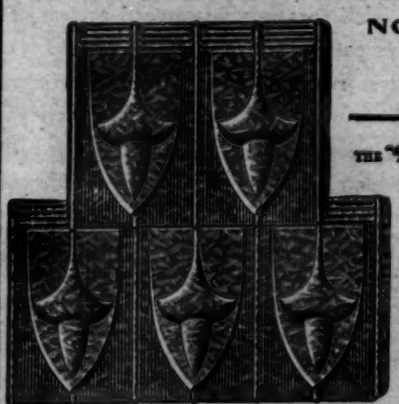

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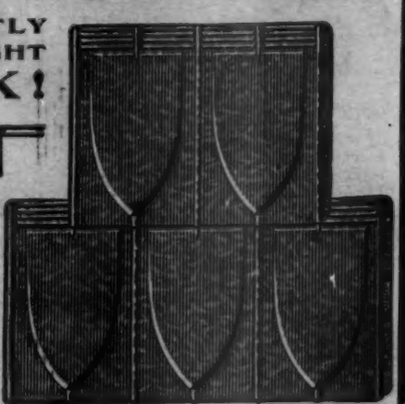

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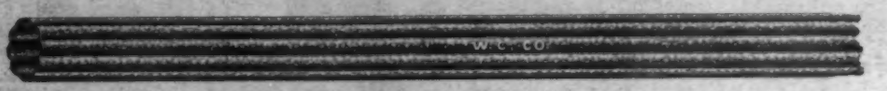

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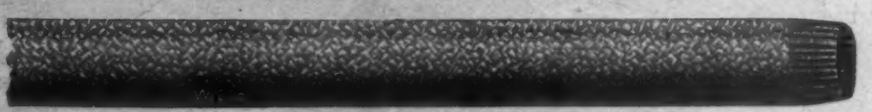

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Specify With

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Makers of the Elbows which can be erected without Refitting and Solder, save Labor and Material.

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The No. 1 C. & L. Fire Pot produces a hotter flame, using less gasoline than any other make. The burner is capable of every needed adjustment and is the outgrowth of over 20 years' practical manufacturing experience. Heats the heaviest irons in half the time required by other makes at the same time melting a kettle of lead or solder. The No. 1 can be used as a torch or brazing fire. This fire pot affords a "knack in use" made possible only through its perfect construction, simplicity and easy operation.

No. 1 Firepot—$6.00 Net.

Jobbers' supply at factory prices, or we will ship direct if cash accompanies the order.

Booklet Free!

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Lock Joint Metal Ceilings

Handsome Panel Effects

Special Designs Submitted on Request

Artistic Combinations

Perfect Joints

Absolutely Dust-Proof

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S. Keighley Metal Ceiling & Mfg. Co.
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Ask Your Dealer For The Sims Soldering Furnace

And You Will Make No Mistake

Always Ready—No Smoke—No Odor—No Noise—Unexcelled—Unequaled—Unrivaled—Safe—Sure—Durable.

Galvanized Iron, Brass or Copper Reservoir
Equipped with Cylindrical Slotted Burner

MADE ONLY BY
BURGESS SOLDERING FURNACE CO.
COLUMBUS, OHIO, U. S. A.

A TRIAL

will convince you that "Canton" Metal Ceilings have a construction that is unequaled. The alignment is straight and regular, which means a saving in time and expense in the erection. Expense of erecting is where you find your profit. Art in Canton Metal Ceilings is one of the features. Complete assortment of classified designs. Our Art Metal Book "H" for a postal. It's up to you.

The Canton Art Metal Co.
CANTON, O.
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HELL Cannot be hotter than our No. 10

Noiseless, No Odor, No Smoke.
More Heat with Less Fuel.
Greatest Range of Heating.
3 to 12 lb.
Coppers Indoors or on a Roof.

Order of your Jobber, or we will ship direct for $6.50, on 30 days approval.

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INTERCHANGEABLE
LOCK-CORNER SHELF BOXES
For the Hardware Trade.
THE A. H. GREEN CO.,
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ASK FOR BOOKLET

A highly important discovery by a practical working tinner. A Perfect SOLDERING Flux, for GALVANIZED and ALL OTHER METALS. Shipped Ready FOR USE in TIN CANS on Approval.

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BEST FURNACE MADE

That is what we give you when buying our Bonanza Furnace. Galvanized Iron Tank. Automatic Brass Pump. Fully guaranteed.

Two sizes, No. 34—1 gal., price..... $6.00 net
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Order from your jobber or send us amount. We will ship direct.

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26 Park Ave. Sycamore, Ill., U. S. A.

SKYLIGHT GEARING AND Chain Lifts

Tinsmiths, Plumbers, Cornice Makers and Coppersmiths

TOOLS

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This Lever Shear is made in seven sizes. It is a convenient tool for shearing plates, bars or angle iron. We build a complete line of Shears, Punches and Bending Rolls, all sizes, for hand power.

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A GLANCE AT THE
CENTURY one-piece Eavestrough Hanger
will convince you of its many commendable features, namely: **simplicity, strength, durability, neatness.**

Easily and quickly attached to building and trough.

Perfect alignment at bottom and bead. Write for Free Sample and Prices.

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EARL'S IMPROVED REVOLVING VENTILATOR

Runs in a self-lubricating bearing that is not affected by heat or cold, and never requires any oil or grease. The Fan revolves without any noise, producing a current of air upward, which positively prevents any down draft. Write for circular.

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TIN PLATE, SHEET IRON, ETC
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Keystone Bar Folder.

Tools for Sheet Metals
INCLUDING
Tinners' and Roofers' Tools, Shears, Punches, Presses and Dies, Can-Making Machinery

MADE BY
NIAGARA MACHINE & TOOL WORKS
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PORTABLE PUNCH No. 20
Made entirely of STEEL
Punches ¼ in. hole in ¼ in. and equivalent
Let us send you one on trial.
Write for circular and price of this and other Marvel Punches and Shears.
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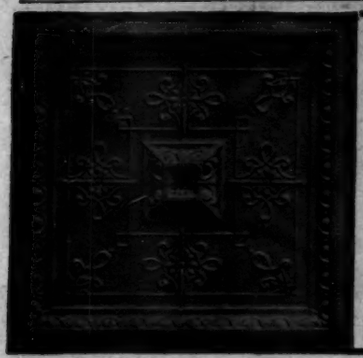
106 N. Francisco Ave., Chicago, Ill.

C. G. Hussey & Company
PITTSBURGH, PENNA.
Manufacturers of

Soft Copper,	Copper Nails and Tacks,	Cold Rolled Copper,
Copper Gaskets,	Tinned Copper,	Special Shapes Sheared or Stamped
Copper Bottoms,	Polished Copper,	Slating Nails.
Soldering Irons	PROMPT SHIPMENT FROM STOCK.	

Where Successful business men have advertised is pretty safe to advertise.



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CUT OFFS
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Have no Cross Seams. Made of Galvanized Iron in ten-foot lengths.

Will not burst when full of ice.

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We manufacture Pure Copper Wire Cable Lightning Rods, made of 28, 30 and 49 Wires, with complete outfit of trimmings

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Trade Supplied at Lowest Rates.
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Uno Revolving Ventilators

A sure cure for smoky chimneys, the best for ventilation.

4' to 30'

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Look Out—Be Careful!

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You Will Profit by Sending Us Your Orders
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Eaves Trough	Cutoffs
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ARCHITECTURAL SHEET METAL WORK

We manufacture our own goods, which we Guarantee

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We have the best Pure Copper Cable

Lightning Rods

and fixtures on the market, and to prove what we say is right, we are willing to send any firm a sample outfit and they can look it over, and if it is not the best they have ever seen, and not satisfactory in every way, we want the whole shipment returned at our expense and it costs them nothing. We manufacture all our own goods and know just what they are, and we want every hardware dealer to write to us for prices and territory. We give a $500.00 guarantee and also one of our improved static machines.

WRITE TODAY TO

Maher & Son Lightning Rod Co., Preston, Iowa

'ELECTRA" PURE COPPER LIGHTNING RODS AND FIXTURES

NOTHING BETTER PRICES RIGHT WRITE US
To convince you we mean what we say, let us ship you an outfit upon approval. If you don't like it, you may return it to us at our expense
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THE HARRINGTON AND KING PERFORATING CO.

PERFORATED METALS

OF EVERY DESCRIPTION AND FOR ALL PURPOSES

FOR SCREENS OF ALL KINDS

No. 212 NORTH UNION STREET, CHICAGO, ILL.

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Iwans' Volcano Revolving Chimney Top

Sizes 6 to 12 inches. Sold by jobbers of Hardware and Tinners' Supplies.

Notice one of its **Strong Features.** The upward sloping opening in back of hood creates a constant upward draft, no matter how depressing the atmosphere.

You need it for some of your customers' chimneys.

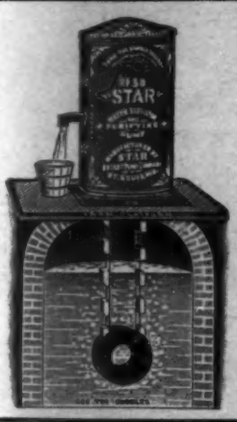
Send postal for catalogue.

IWAN BROTHERS

Mfrs. of Hardware Specialties

STREATOR, ILL.

Drink Pure Water



The **No. 50 Star Pump** shown here will positively purify the water in any well or cistern in a short time.

This purifying feature alone makes it the only pump fit to put in any well where the water is used for household purposes, for it will surely save its cost in the Doctor's bill many times over.

Then it is a very substantial and handsome outfit, and will last for years.

Our line of purifying pumps is very complete. So is our line of Galvanized Chain Pump Curbs and Tubing.

Ask your jobber for Star Pumps.

STAR BUCKET PUMP CO.

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A Case That Saves You Money

Saves because it offers higher quality at a lower price than you can find elsewhere in a "knock-down" case. Makes money for you because it gives perfect display to articles in it.

The Wolverine Show Case

is not a shoddy, trappy case, but is of the highest quality throughout made of solid oak, with beveled plate glass top, nickeled fittings and brackets. Our knock-down method of shipping saves two-thirds the freight cost. Send to-day for our new catalog. Address Dept. C.

Michigan Show Case Co.

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Celebrated Meier Drain Trap

Prevents water from backing into cellar when water rises in the sewer. Lets water out of cellar. Keeps out sewer gas. Guaranteed. Any one can attach. Pat. applied for. Write for particulars.

THE MEIER DRAIN TRAP MFG. FACTORY

UPPER SANDUSKY, - - OHIO

Standard Metal Shingles

The Canton Ventilator

Made with Metal and Glass Tops and with and without **Automatic** closing device.

THE CANTON MFG. CO.

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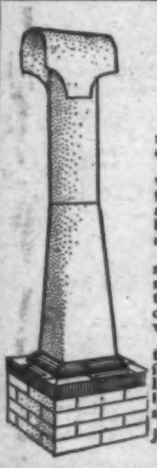
Makers of

Cornice, Skylights, Metal Ceilings, Eaves Trough, Conductor Pipe, Etc.



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Adjustable Cast Iron

STACK BASE

For Chimney Caps and Stacks

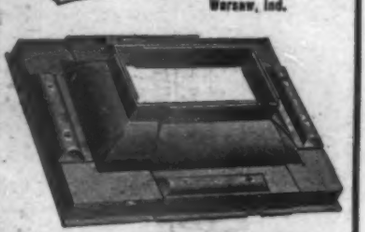
The only Stack Base made that is put on without mortar.

Absolutely prevents water from running down the inside of the chimney and at the same time keeps it from following down the outside.

Absolutely firm. Preserves the top of the chimney and does not loosen the brick or harm the chimney when the galvanized pipe is replaced.

By removing the bolts this base will fit four different size chimneys. Looks well and will last a life time. Write for descriptive matter.

J. M. HERRIN CO., Mnfrs., Warsaw, Ind.



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TECHNOLOGIST

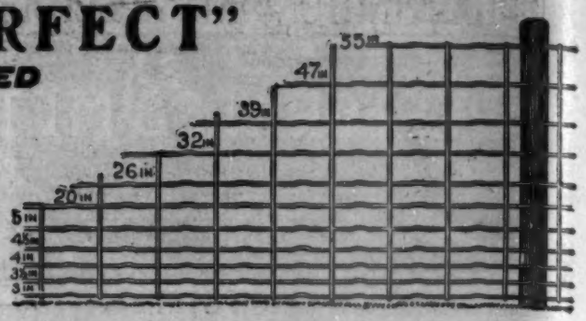
Designs, builds and starts new plants, improves quality and reduces the costs in those already established.

THE VERY STRONGEST FENCE MADE

"PITTSBURGH PERFECT"

ELECTRICALLY WELDED

Fences



will curb in the strongest beasts. Can be adjusted to uneven ground. Are a sure cure for all fence troubles and will last longer than any other on the market. Dealers wishing to handle a line of goods which will prove ready sellers should carry the

"Pittsburgh Perfect Brands"

of Wire Rods, Bright Annealed and Galvanized Plain Wire, Barbed Wire Wire Nails, Fence Staples, Steel Hoops, Bands and Cotton Ties.

MANUFACTURED BY THE

Pittsburgh Steel Co., Pittsburgh, Pa.

Gray's School
—OF—
Sheet Metal Pattern Drafting

Can you lay out any pattern?

If not, write for Sample blueprint drawing and Circular giving full information concerning our 25 months' course in Sheet Metal Pattern Drafting.

Every study in this course is solid study on the development of patterns as they are required to be made in a MODERN CORNICE OR SHEET METAL WORKS.

Having adopted the easiest and shortest methods of developing patterns, and selected the problems that come up in every day work from the easiest to the hardest.

Two evening's study each week will fit any ambitious mechanic or apprentice to lay out and develop anything in the sheet metal line.

NOW IS THE TIME TO START THIS COURSE!

The evenings are becoming cool and long, which is conducive to hard study.

The many scholars who have been advanced to positions of foremen and cutters since taking this course is ample proof of the great benefit they have received through this school.

You study at home, in a class by yourself, at your own spare time. This (25) months' course costs less than 5 cents a day, payable monthly.

Write for circular giving full information concerning this school, also full size blueprint drawing. enclose 4 cents in stamps to cover postage. When writing please mention THE AMERICAN ARTISAN. Address:

GRAY'S SCHOOL
1028 Jackson Ave., New York

YOU

need a Tinner, Furnace Man or Hardware Clerk. A want ad in

THE AMERICAN ARTISAN

That's all that's necessary to solve the problem.

"Yankee Tools"

Are Without Equal in Quality or Efficiency in Practical Use

New Styles—Have You Seen Them?

MAGAZINE RATCHET SCREW DRIVER, NO. 68

RATCHET DRIVER with SCREW HOLDER NOS. 110-111-118

RATCHET "SCREW EYE" DRIVER, NOS. 80 and 81

ASK YOUR JOBBER ABOUT THEM

Send for "Yankee" Tool Catalog.

North Bros. Mfg. Co., Philadelphia

DEALERS! Here is a sample of our Farm Advertising

Handle ours and you will be on the right side. The farmer knows about them. We have a branch at Kansas City and can ship on short notice.

"THE DENNING" CORN CRIBS AND GRAIN BINS

Will store your whole crop at a nominal cost.

"THE DENNING" FENCE

Will take care of your poultry, hogs and stock.

"THE DENNING" LAWN FENCE

Will ornament your premises.

Ask your dealer for "The Denning." Take no substitute.

THE DENNING WIRE & FENCE CO. CEDAR RAPIDS, IOWA

THE EUREKA ADJUSTABLE AUTOMATIC GATE

We also manufacture LAWN AND FIELD FENCE; WALK, DRIVE AND FARM GATES, FISK GRASS TRIMMERS, TRELLIS WORK, UMBRELLA RACKS, ARBOR WORK, CHIMNEY TOPS, EARTH AUGERS, EAVE TROUGH HANGERS, WIRE REELS, FENCE MACHINES, FENCE SUPPLIES, ETC.

Best and cheapest on the market. Constructed of the best steel tubing and best galvanized steel wire.

IT CANNOT BE IMPROVED UPON

All the latest practical improvements are embodied. The working parts are few and simple. The **single trip** is always in position and of sufficient length to be hit on dark nights. No danger of breakage. Write us today for further particulars.

EUREKA FENCE MFG. CO.
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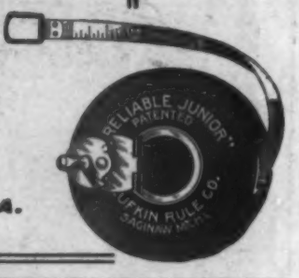
LUFKIN Measuring Tapes

are made in every conceivable variety, to suit every purse and purpose, but all of the same superior quality.

¶ Our extensive advertising creates a demand, that every progressive dealer should be able to satisfy.

¶ It takes but a minute and a postal to ask for our catalog—it's more than worth while.



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DISSTON SAWS { Run Easiest / Cut Fastest / Last Longest

To the practical Saw User this tells the full story of HIGHEST PERFECTION in Material, Temper, Design and Workmanship attained for the DISSTON BRAND OF SAWS.

HENRY DISSTON & SONS, Inc.

Keystone Saw, Tool, Steel and File Works

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STRAP & T HINGES
Pressed
Steel Shelf
Brackets

BUTT HINGES
Barn Door
Hangers
and Track

Our Planished Steel **STRAP and T HINGES** are now all made on Automatic Machinery—Every one is as true as a Die.
Our **BUTTS** are unequalled in Workmanship and Finish, All our Goods Guaranteed—**BEST IN THE WORLD.**
(And they cost no more.)

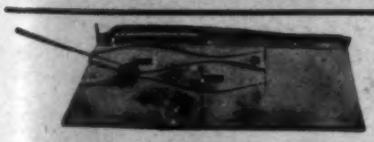
THE GRIFFIN MFG. CO., 1500 Cherry St., Erie, Pa.

A NEW PATTERN STANDARD LEVEL—Two Level Glasses, One Plumb Glass

Side glasses may be reversed at any time; all easily adjustable; all glasses in plain view from both sides; brass trimmings on both sides.

No. 31—Solid Cherry.
No. 32—Three-piece Cherry.
No. 33—Solid Mahogany.

THE BAKER-McMILLEN COMPANY, Akron, Ohio.



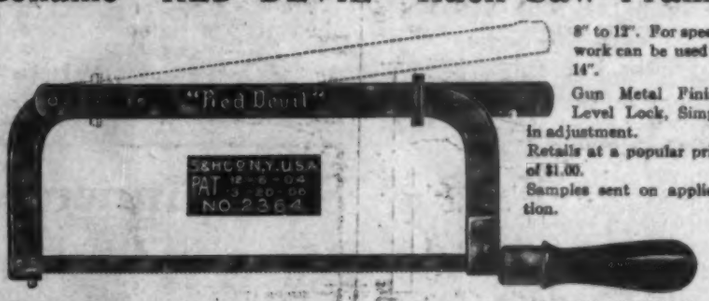
The Wagner Patent Elbow and Slitting Shears

Will save time and money in making elbows and when used in connection with a cornice brake light iron can be cut any width and length. Buy a set before your competitor does. These shears are thoroughly guaranteed to give satisfaction or no sale. Made by

C. DeWITT WAGNER, Cedar Rapids, Iowa

J. F. LEWIS, Cisco, Ill., *Writes "I cannot get along without The American Artisan"*

Genuine "RED DEVIL" Hack Saw Frame



8" to 12". For special work can be used on 14".

Gun Metal Finish, Level Lock, Simple in adjustment.

Retails at a popular price of $1.00.

Samples sent on application.

Order through your jobber or direct from us. Insist upon the Genuine "RED DEVIL."

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THE TAYLOR & BOGGIS FOUNDRY CO.

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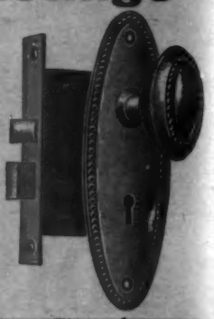
Manufacturers of

Light Gray Iron Castings

BUILDERS' HARDWARE, DAMPERS AND DAMPER CLIPS, OIL AND GAS STOVES, FURNACE LAMPS, MOLASSES GATES, LETTER BOXES, HARDWARE SPECIALTIES.



HENKEL'S AUTOMATIC RAIN WATER SHIFTER

Guarantees Pure Water in Your Cistern

It permits only pure, clean rain water to enter the cistern. It automatically carries the first sooty, filthy drainage from the roof to the waste pipe, and not until the water runs clear and pure does it go into the cistern.

IT IS AUTOMATIC—SET IT ONCE

No more going out in the rain—no more trouble or cleaning cisterns—pure, clean water always.

Write for circulars prices and full information

THE HENKEL MFG. CO., Canal Dover, Ohio

The EVEREADY GAS SYSTEM Requires No Generating

Nothing like it now on the market. No worry, no work, no odor, no smoke, NOISELESS. Will light a store 100x30 ft. two hours a night for 10c a week. Always ready for instant use. Turn on the gas and light the same as city gas. Can be installed for a very small amount.

SEND FOR DESCRIPTIVE MATTER AT ONCE
LIBERAL CONTRACTS TO LIVE AGENTS

Eveready Gas Company,

Department No. 31. Lake and Curtis Streets Chicago, Ill.

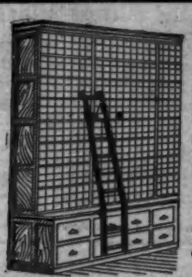
Revolving Cases

for Bolts, screws, etc. SAVE TIME and MONEY

A necessity for Hardware Dealers, machine shops, pattern shops and in fact any one who handles small articles. Last indefinitely. Made octagonal or square as desired; also with blank drawer fronts with label holders. Descriptive booklet sent on application. Sold by all first class Hardware Dealers.

AMERICAN BOLT & SCREW CASE CO

Dayton, Ohio



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Are made to fit all kinds of high shelvings and are guaranteed to be satisfactory in every respect.

HIGHEST AWARD
St. Louis World's Fair
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Manufacturer
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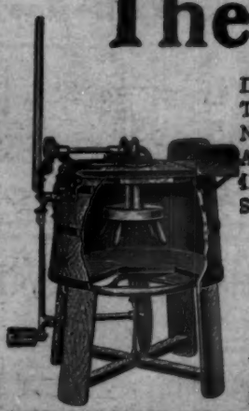
The White Washer



DOUBLE BALL BEARING. FLY WHEEL UNDER THE TUB. HIGHEST SPEED. EASIEST RUNNING. QUICKER REVERSE. FOOT POWER ATTACHMENT. TUB OPENS WHEN MACHINE IS IN FULL MOTION. FIVE YEARS' GUARANTEE. SOLD TO ONLY ONE DEALER IN EACH TOWN.

Ask for Exclusive Agency
and Get Acquainted With

The White Way

White Lily Manufacturing Co.
1500 Rockingham Road, - Davenport, Iowa

THE FRANKLIN WIRE STRETCHER

A One Man Wire Stretcher. Sold by Jobbers and Handled by Factories

The Franklin Wire Stretcher

has been changed slightly, making it now one of the strongest stretchers on the market.

Our stretcher is self-locking, locks at every point, is very light. We are able to pull up to within fifteen inches of the end posts and are not obliged to set a post beyond, as with most other stretchers.

C. F. SMITH COMPANY, - DeKalb, Ill.

100 Tinners' Patterns

Complete for $1.00

Sent Postpaid on Receipt of Price.

DANIEL STERN, 355 Dearborn Street, CHICAGO.

WOODEN WARE

SPECIALS TO ORDER — THE THURNAUER TURNERIES — STAPLES IN STOCK

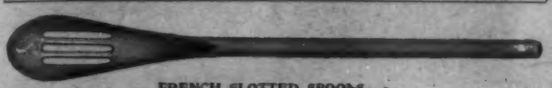
You will be interested in my complete line of Rolling Pins, Potato Mashers, Lemon and Lime Squeezers, French and other new shapes in Spoons, grooved and plain Fish and Steak planks, Knife Boxes, together with the complete line of all wooden Kitchen Wares on display in my centrally located salesroom.

The prices are as low as those you have been paying for the ordinary kinds of wooden ware, even though I take pride in making them just a little better than it seems necessary.

Separate catalogues are in preparation covering each line, such as Household goods; Oriental Art Brass goods from the markets of the world; of Wooden Wares; of Wire Goods; of Appliances for Heating, Lighting and Cooking with denatured Alcohol as fuel and which are made in my own factories.

Write For Discounts and Complete Prices, and ask for the Catalogues in which You are Interested

POTATO MASHERS
MAPLE—No. 2004—$15.75 gr.
HOLLY—No. 2037—$31.50 gr.
No. 1848—Highly Polished, $40.50 gr.



FRENCH SLOTTED SPOONS
MAPLE—No. 2002—12" $12.00 gr.; 14" $14.00 gr.
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BUTTER SPADES
MAPLE—No. 2005—$8.10 gross
HOLLY—No. 2038—$9.90 gross

THE THURNAUER TURNERIES WOULD TURN OUT YOUR WOOD TURNINGS BETTER THAN ANY OTHER TURNER WOULD

BOSTON, MASS.
James H. Turner,
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THE SNOW WHITE ROTARY WASHER

Does a bigger and better "Wash" in less time with less worry and less work than the just as good kind. For that reason it's the all-the-year-'round favorite among thrifty housewives.

ITS POINTS OF EXCELLENCE:

Anti-Friction Roller Gearing
Sliding Block or Dasher of Hardwood
Tub of Finest Louisiana Red Cypress
Corrugated Staves and Bottom

Handsomely Finished Easy Running Easy Selling

You'll have to search long to find its equal anywhere as a washer and seller.

The Question remains: How many do you need

Let us tell you about the rest of our line.

H. F. BRAMMER MFG. CO. DAVENPORT, IA.

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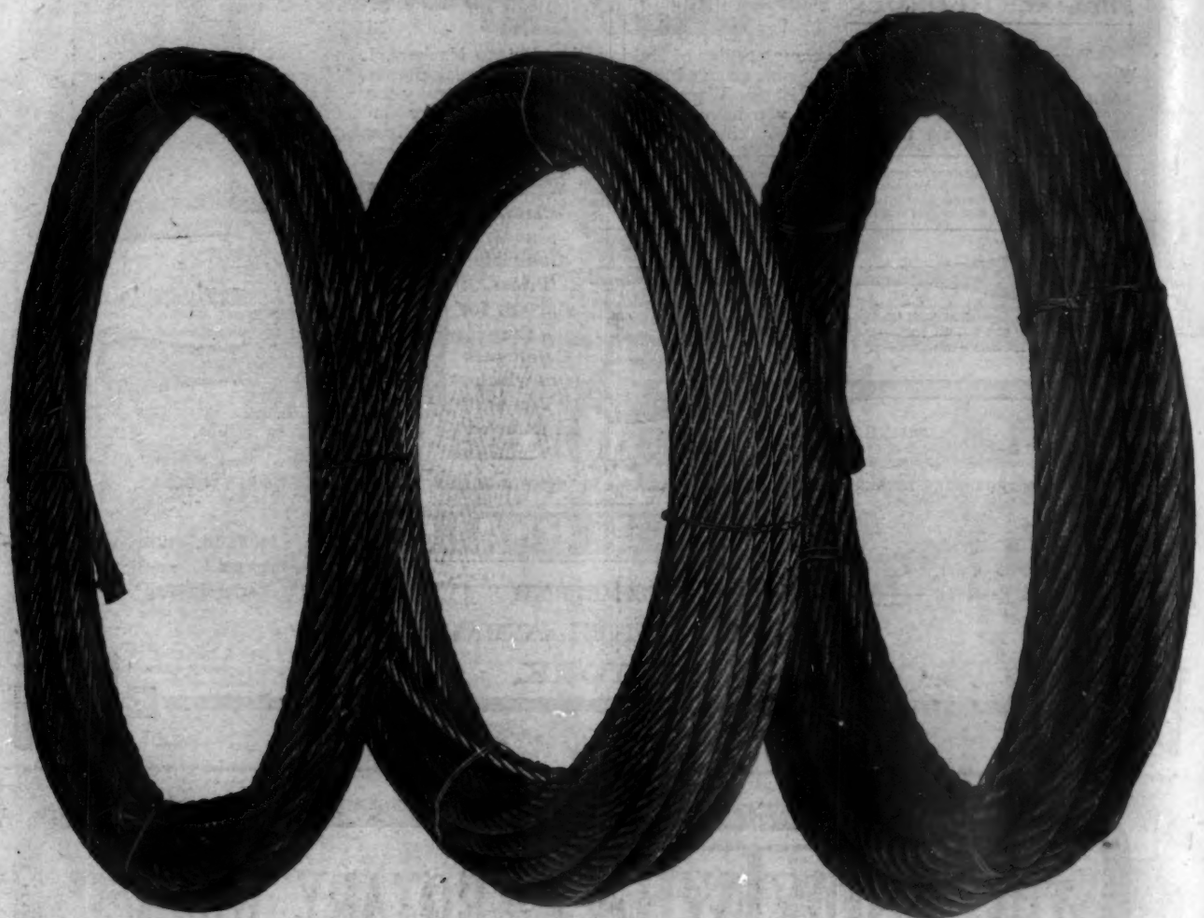
Large stocks carried at convenient points all over the country, ready for quick delivery in either short or long lengths, on reels or in coils.



72 Feet
¾-in. Crucible Cast Steel
Hoisting Rope

202 Feet
¾-in. Monitor Dredge
Rope, 6 x 19

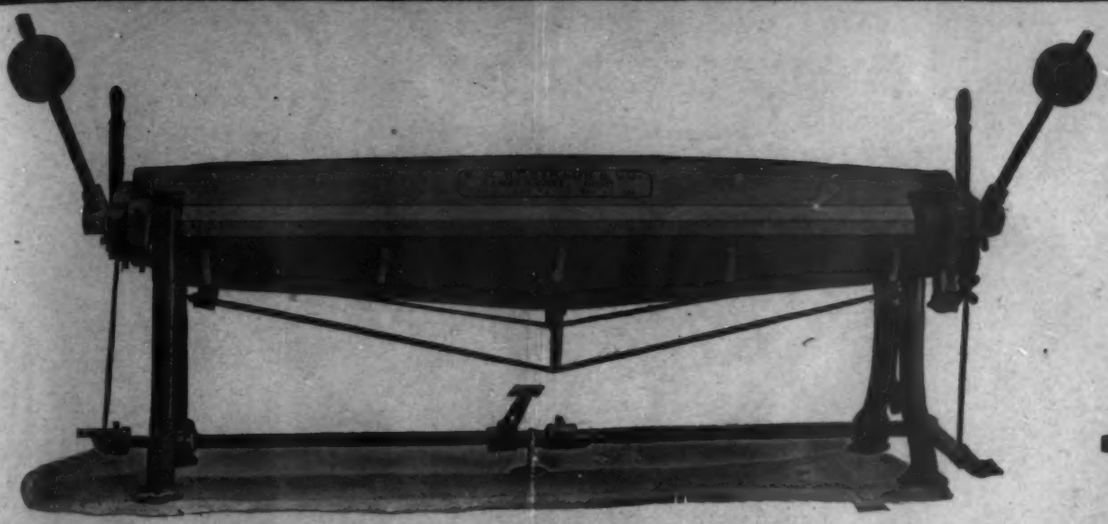
78 Feet
1-in. Plow Steel
Hoisting

American Dredge Rope

IN the great work of reclamation of the submerged lands of the Mississippi Valley there is no more active mechanical factor than our dredge rope. We make this rope with full knowledge gained from years of experience in the hard usage to which it is subjected, than which perhaps no other service can show an equal. There is not the same risk of life that goes with the operation of an elevator or a mine hoist, but there is greater wear, necessitating a very close study of the requisite quality of material and also experience in manufacture, to produce a flexible, reliable and durable dredge rope.

We offer our rope to dredgemen with assurance of the highest *uniform* quality and efficiency, as proven by the many years that it has now been successfully identified with this service.

American Steel & Wire Co. Chicago New York Worcester Denver San Francisco



The above cut shows the general design of our Cornice Brake. These Machines are guaranteed for No 20 Gauge material and lighter, and with Heavy Bending Attachment for No. 18 Gauge. With each brake is furnished 2½-inch, 2-inch, 1½-inch and 1¼-inch wood formers, and 1-inch, ⅞-inch and ¾-inch iron forms, also friction clamps for holding same. All machines are fitted with foot treadles, quadrant gauge and three quadrant stops.

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If you buy the right goods they will sell themselves—
Particularly true of "**Enterprise**"
Food Choppers
Best Made
Best Known
Best Liked
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This picture shows the graceful lines and strong simplicity of the
"ENTERPRISE"

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A capacious hopper that holds more, instead of less, than it appears to hold
A perfect cutting mechanism
A tight, true feed screw
Double tinned
Four knives with each machine

THE ENTERPRISE MFG. CO. OF PA.
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THE IMPROVED ONE-PIECE MITER

This miter is made absolutely correct, true to shape, size, and bead, and the easiest connecting slip joint. Will save your time and temper. In case your supply house cannot furnish them, send your order direct to the

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ROCKFORD, ILL.
Manufacturers of Sheet Metal Specialties.

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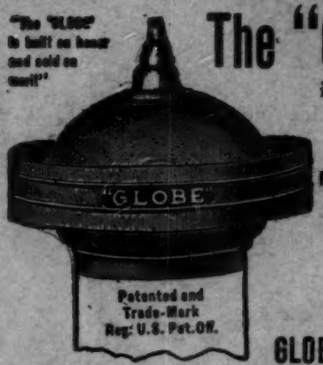

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For Perfectly Ventilating Schools, Churches, Halls, Mills, Factory and Audience Rooms of Every Character

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"GLOBE VENTILATED RIDGING"

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are **guaranteed** to be absolutely soot proof. Cannot be jarred or blown from the flue hole.

Finished in Brass and Nicely Decorated

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STUBER & KUCK, Peoria, Ill.

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HAMMERED OPEN HEARTH

ROOFING TIN

The good reputation of **SCOTT'S EXTRA COATED** has been made by following the best known methods in manufacture. The base is **HAMMERED OPEN HEARTH MATERIAL** made just the same as it was in Wales. The coating is properly proportioned of the best tin and lead. It is applied heavily and evenly. The plate is soft and works easy, and for lasting qualities cannot be surpassed. It has been used 25 years without complaint.

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TINNERS' SUPPLIES OF ALL KINDS

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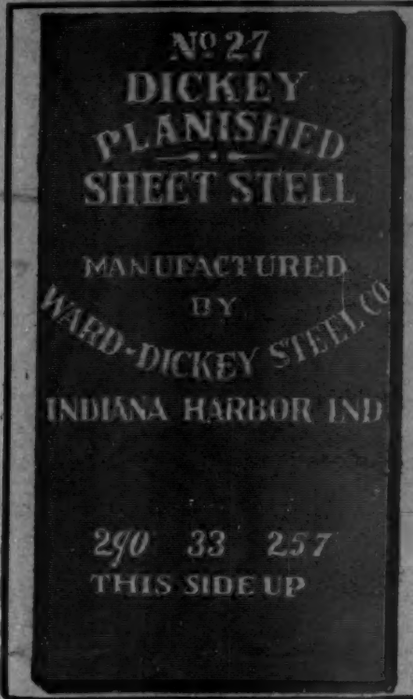
ST. LOUIS, care of Stochoff Supply Co.



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Holds its color under most severe tests.

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